



An article in *The Observer* earlier this month by Annabel Ferriman told the story of Helen Nash who was born without legs and had endless problems getting the right artificial limbs until she went to Germany and was fitted with a satisfactory limb within two days. Helen made the point that there are lots of people in this country who cannot afford to go to Germany and will just have to put up with the delays and discomfort caused by the inadequacies of our own artificial limb and appliance service.

That rings familiar bells in my mind because although I do not have any artificial limbs, I have held myself together and propped myself up for many years with various appliances and they have caused me a deal of trouble as well as occasional hilarity. I came out of hospital after two years in my 'teens with callipers and a splint support, gradually threw off the callipers and part of the support and am now back with most of them, carrying around a weight of metal that would worry people who were fit and able.

I hope that does not sound ill-tempered because the people who make and supply appliances are some of the most considerate people you could meet. And I have met many. I worked for a year in the tailor's shop at the hospital during the war, making the bright blue suits worn by disabled soldiers. My friends on the ward mostly worked in the splint shop, making callipers and back supports and all sorts of things with steel and leather. We were a happy gang, with some very original jokes.

The problem is not that. It stems from the fact that there is a near monopoly by manufacturers of limbs and other components who do not have to bother and can be very unhelpful indeed. Whenever I ask an appliance provider if there is not a lighter metal for a leg splint (or indeed a range of materials used in such machines as space shufflers) they always reply that they have little freedom within the health service and that we just have to make the best of an unsatisfactory situation.

A report commissioned by the Department and submitted to the Government of Health and Social Security found that one in four of amputees complained of uncomfortable limbs, that the choice of limbs is restricted to those made in this country, usually by one of three suppliers, that most are delivered late and that the Civil Service seems unable to control costs, prices or the profits of suppliers.

I have for many years, from in fact the earliest days of my being an appliance wearer, had an impression that a fundamental problem was that those responsible for the service are not the best administrators and are not in any case practical people. I remember well being treated by an admirable consultant, himself disabled, who was however the most unpractical man, with no idea of engineering or design and therefore helpless when it came to discussing better ways of solving a mechanical problem. Orthopaedic specialists ought to be given some special training in engineering. Or perhaps they should just get an education in Germany which is more technical than ours.

Patrick Nuttgens

Letters to the editor

PhD completions and the polys

Sir, - In his letter (*THE*, March 28), Dr Cross suggests that polytechnics, as opposed to universities, are already actively engaged in implementing my suggested corrective adjustments (*THE*, March 7) to tertiary education, particularly to PhDs. He provides plenty of convincing reasons for this respect, not least of all being the far greater industrial experience and collaboration they enjoy.

While I wholeheartedly accept the main thrust of his letter, I have some reservations concerning the evidence behind one or two of his assertions. First, there is nothing in the figures of Council for National Academic Awards supported PhD completion rates to suggest that polytechnic PhDs are better motivated than their counterparts in universities. Second, it is likely that the admirable research and teaching approach with which he is familiar is subject-specific rather than applicable to the polytechnic environment as a whole. Dr Cross's department, the school of maths, statistics and computing, should rightly be more than a little familiar with systemic methodologies since certain proven methodologies, such as systems engineering, analysis, etc., are almost

(incorrectly) synonymous with computer science. I have doubts whether other disciplines will ever possess the same healthy teaching and research environment for many years to come. The major reasons underlying this pessimism are two-fold. If education is to effectively contribute to Britain's economic recovery, academics have to be at least aware of the dialectics of the arguments, and the solutions. Those wealthy departments who are fortunate enough to contribute directly to industrial change often show a disturbing lack of interest in educational matters. At Leeds, the massive engineering block receives only two out of the 23 university copies of *THE* (one of which is held behind the counter since it's hardly read); similarly, the university library subscribes to four engineering education journals in contrast to over 400 engineering research periodicals. Consequently all those articles in educational publications, past, present and future, only convert the already converted.

Why should this be? The entire basis of educational reform in this country is dependent on the "goodwill" of lecturers to implement corrective adjustments. Academics are not promoted or respected for lecturing ability, con-

tent, or supervision - none of which are truly examinable under the present system despite the empty rhetoric of "notes to promotion" guides. Rather, it is that all-important criterion - the amount of papers published. Under this kind of incentive scheme, applicable across all disciplines, undergraduates become inconsequential and PhD students are tickets to promotion.

The best intentions of academics and industrialists are thus undermined by such bottlenecks in our education system. The situation will worsen with the swing in funding bias towards technical disciplines, there will be even less pressure for science and engineering academics to tailor their skills for industry. There appears to be an uncharacteristic reticence to debate such taboo subjects... and I wonder why.

Yours faithfully,
DROLINGA TA'ED,
University of Leeds.

Sir, - As a graduate in mathematics of Thames Polytechnic and a current research student at Durham University I was most interested to read the letter from Dr M Cross.

While I agree with his comments about the qualities of polytechnic

undergraduate courses, our experience at postgraduate level is a different matter. I am a fully documented research student at the University of Leeds. Herein must lie the difference between the research philosophies of the two types of establishments since the search problems, including those of industrial collaboration, tend to be more open-ended. I have found the direction of each stage of research is dependent upon my results and the dialogue with industrial and academic supervisors would have been impossible to completely map out my project at inception.

Furthermore his research students must consider themselves to be fortunate since I have found that very nature of research, and by a process specialization, tends to late students not least because it becomes very difficult to talk about day to day research problems with someone who isn't closely involved with the project, perhaps at the same level.

Yours sincerely,
J A WALSH,
University of Durham.

Planning axe

Sir, - I refer to your report on the proposals contained in the final report of the Transboundary Town and Country Planning Working Group (*THE*, April 4). While this provides an admirable synopsis of the proposals, the wording in parts could prove misleading.

In the second paragraph it is stated that "Only six departments out of the present 25 meet the group's main criterion, i.e. the ability to support 15 full-time staff." The report does not say that these are the only departments that could achieve what it terms "the critical mass"; rather, it lists the departments that the group recommends be upgraded to second level.

Contrary to the suggestion in your third paragraph, no merger is proposed in Dundee. The College of Art is already linked to Dundee University; the report hopes that beneficial links will be formed with the University of Aberdeen.

Paragraph four implies that the proposed bar at the end of third year restricting entry to the fourth "professional" year to students in the last and 2:1 degree categories will apply automatically. This could not be effected in Scotland where first (honours) degrees are normally of four years duration; indeed, the report recognizes this.

In paragraph five it is stated that the Natural Environment Research Council is currently responsible for postgraduate student support in town and country planning; it is, in fact, the Economic and Social Research Council which administers these awards.

Finally, paragraph seven states that Dundee was recommended for geographical reasons and "because of its high quality". The report makes no specific reference to quality as a criterion in the case of Dundee; equally, there is no evidence that an assessment of quality was undertaken across the Scottish planning schools for the purposes of the report nor is there evidence in the report to any stated measure against which such assessment might have been made.

Yours faithfully,
W. FERRIE WOOD,
Vice Principal, Edinburgh College of Art.

Many universities have complied with the law and registered their computer records with the Office of the Data Protection Registrar said: "A lot of institutions are leaving registration right up until the last minute."

The universities have had a more difficult task than most because it has involved the records not only of departments but also of individuals within those departments who might hold data on a personal computer."

Dr Waters said that universities would have the choice of responding in 40 days with whatever data they still had on file being made available to an applicant or opting for a period of up to five months after which time all intermediate results including the final marks would have to be divulged.

Those universities who remain undecided are still discussing whether they should put their marks onto data base or transfer them onto manual records rather than be obliged to reveal their exam records. Oxford's five departments who already have exam marks on computer plan to keep to the practice but most departments will keep to manual records.

This would mean that in 18 months those universities would be given 40 days to comply with a request from a

'Loans for learning' launched

by Maggie Richards

A pay-as-you-learn loan scheme for employees, involving three major banks, is to be launched by the Government on a trial basis.

A prime aim will be to interest far more working people in vocational education - while at the same time putting pressure on institutions in both further and higher education to adapt provision to meet needs of a new student clientele.

Initially the scheme, sponsored by the Department of Employment will be run in four pilot areas, including one in Scotland. If successful it is likely to be expanded rapidly into a national loan programme.

Details were announced this week by Lord Young, Secretary of State for Employment, as he signed contracts with the three participating banks - concerns, Barclays, Clydesdale, and

the Co-operative Society. Loans will be available to employees wanting to train to improve their career prospects but applicants will not need to be customers of the banks.

If an application to the local branch manager is successful, the employee will not pay interest on the loan during training, and for three months following completion of a course.

Instead, the Government will cover the loan interest repayments for the set period.

Loans will be available to pay fees ranging between £500 and £5,000 for courses lasting between a week and a year. The loans will cover up to 80 per cent of tuition costs.

Over the three years of the project the banks will allocate up to £12 million and the Government has agreed to underwrite a proportion of this sum.

Lord Young, though, refused to

disclose on Tuesday exactly how much of the £12 million the Government had agreed to guarantee.

The guarantee will enable banks to put up the money for vocational training awards.

Lord Young hoped that the scheme would stimulate training providers into making more flexible arrangements to meet the demands of the new students.

But he did not expect the arrival of the scheme to lead to a massive growth in private training, anticipating that the share out of provision between private and public institutions would remain at about the same ratio.

Trials of the officially termed "career development loans" will take place in Aberdeen, Bristol and Bath, Manchester, and the Reading and Slough area. An advertising campaign is to be launched in each region with the message: "Get into training - it's a good investment".

Academics urged to give up part of pay

by Olga Wojtas
Scottish Correspondent

Mr Stanley Adams, whistle-blower on the multinational drug company Hoffman-La Roche, has proposed in his inaugural address as rector of St Andrews University that academics should donate part of their salaries to third world students.

Mr Adams, who was imprisoned by the Swiss government for industrial espionage after leaking documents on Laroche to the European Commission, won his case against the commission for breach of confidence last December, with the European court of justice ordering the commission to pay him £500,000.

He said that for centuries the more advanced European nations had taken what they could from the colonies, giving very little in return.

"Would it not be fair, moral, Christian and human to guarantee a number of places in our university for third world students who cannot afford the dollars which United States students bring here?" he asked.

"Perhaps the academics who care so much about their own freedom would search their hearts and decide to forego part of their salaries to enable a few poor third world students to come here and receive the benefits which most of us enjoyed when we were students."

Tenure was one of the vested interests which must be attacked in the fight against the present crisis in education, Mr Adams said.

"While three-quarters of the 11,000 university researchers have less than a year of their contracts to run before they will be forced to compete for the few vacancies available, there is a lot of hypocrisy about academic freedom higher up the academic ladder."

"We see senior professors holding part-time jobs outside the university, even though they have tenure and are

well paid to give their full time to the students of their university. We see others wanting to hold on to their chairs almost until they die."

More academic freedom for those currently excluded from higher education must involve some compromise of the academic freedom of professors.

During his three years as rector, Mr Adams said he hoped in particular to see three things: a re-merger of St Andrews with Dundee University; the Scottish universities retaining funding from the University Grants Committee; and a change of national government as soon as possible, with a Secretary of State for Education of sound academic principles.

Mr Adams said he believed that it was only through Dundee and St Andrews, which separated in 1967, joining forces once more that a true centre of academic excellence would be achieved.

And he warned that the Scottish universities would be losers in the long run if they left the UGC for a devolved Scottish university system as suggested by the Scottish Tertiary Education Advisory Council.

Mr Adams accused Sir Keith Joseph, Secretary of State for Education, of inventing "the new barbarism" in the Green Paper for higher education, which aimed to make the system directly relevant to work and technology.

"You don't have to be a socialist to know that this is the wrong way to tackle the problem of today's education system," he said. "You don't have to be a socialist to know that there are higher values than the medium term financial strategy."

"Who wants an economy that is served by private universities like the University of Buckingham? Well, Mrs Thatcher does, because it's the only place that will give her an honorary degree. But the University of Buckingham has no higher purpose than cramming for law degrees."

Computer deadline looms

by Felicity Jones

Few universities have complied with the law and registered their computer records with the Office of the Data Protection Registrar said: "A lot of institutions are leaving registration right up until the last minute."

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Action over poly degrees

Urgent action to bring forward a system of accreditation under which polytechnics may award their own degrees was launched this week by the Council for National Academic Awards.

It set up a high-powered strategy group of academics and industrialists to examine the requirements for accreditation, headed by CNA chairman Sir Alastair Pilkington.

The council agreed a framework for institutional validation under which much of the vetting of courses now carried out by the CNA will be conducted by staff at individual institutions under arms-length scrutiny by the CNA.

The council ratified the first agreement under the scheme - with Kings-ton Polytechnic - but only for one year rather than the expected three years in the expectation that steps towards accreditation, which will involve changes to the CNA charter, are imminent.

Polytechnic directors this week left Sir Keith Joseph, Secretary of State for Education and Science, in no doubt that they see the ability to award their own degrees accredited by the CNA as desirable. The retiring chairman of the Committee of Directors of Polytechnics, Dr Harry Law, said he hoped progress would be rapid.

Sir Keith is expected to discuss the CDP arguments both with his own officials and with Sir Alastair.

A report on progress is to go to a special CNAA council in June and by July the strategy group is expected to be able to indicate what charter changes and other issues are involved.

'No confidence' vote moved by disgruntled architects

A vote of no confidence in the Royal Institute of British Architects' attitude to proposed cuts in architecture schools was to be put this week at a special meeting.

The meeting, called by 100 RIBA members, takes place at a time when a final decision on the fate of North East London and Huddersfield polytechnics is imminent. Both were given 21 days last month to appeal against the Secretary of State for Education's decision that intakes to architecture should cease from this autumn. There is speculation that at least one university school of architecture may be closed.

Members who initiated the meeting want the institute to resist pressure to reduce the scope of architecture education, and support existing schools with a view to raising quality and standards in line with the institute's charter.

Last week, staff and students of NELS took the unusual step of running a half-page advertisement in the leading architectural journal *Building Design* to put the case for the vote of

no confidence and ask for the support of all corporate members of the institute.

The advertisement attacked the institute on two counts. It deplored the shameful role in not even offering comments when the Government proposed the closure of schools, and questioned whether it could remain the monitoring body for standards in architectural education.

It also says that the case for under-employment is fatuous. It points out that less than two years after the Esher report on architectural education its predictions about employment are already a third adrift, with large offices facing a shortage and not a surplus of able assistants.

Moreover, it says that from this summer, architects of the EEC will be able to practice where they wish within the community. It asks if it is practical to support UK manpower planning in the face of this, suggesting that able British entrants to the profession will suffer.

● Transboundary review pages 12-13.

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DON'S
DIARY

MONDAY

Find the porter to give me the key to my "new" room, the changing rooms for the men's and women's changing rooms by the gym. I have already been warned by my male colleagues not to listen to the conversations that may go on while the male students are having a shower! I hope I don't have to put cotton wool in my ears, especially in the summer. This really is a room for a sports enthusiast - contains a shower, an airing cupboard and a washbasin. The previous occupant kept his filing cabinet in the shower - what a travesty! A shower is a shower is a shower, and nothing I can do will make it a cupboard.

Unpack the tea chests with my few belongings and have to be careful of splinters. Have decided to keep the homely touch of my old dismal room, and so put my lace doily under the telephone. Unfortunately, my pot pourri, my busy lizzy and my gramophone are all missing. Will have to hunt for them after my lecture.

Decide to eat in the students' refectory since the traffic will be heavy at this time of night. It is not a wise move though. Since I am now a vegetarian, my choice is restricted to soggy courgettes and cauliflower with a spoonful of apple sauce. Pray that Tesco is still open so I can buy some fresh fruit. My prayers are answered. I arrive home in the dark, dropping the apples and oranges on the pathway.

TUESDAY

An out-and-about day, observing further education lecturers teaching their colleagues. Have to park in the centre of Oxford, at St. Giles. I am always very impressed with the standard of teaching of our students. Perhaps I should write to Sir Keith about it. I think in further education one either sinks or swims as a teacher. Well can I remember the days when I had to teach day release welders and motor mechanics. That sort of work I learnt the hard way about the unity of educational theory and practice.

Resist the temptation to pop into Laura Ashley's. Have rather gone off those baggy dresses anyway. And if I do enter those doors, I know I shall end up buying something which I shall only change.

Heart and minds must be fed though, and a trip into Blackwell's and buy a volume of 19th-century love poems and a new book by Virago about the lives of black women in Britain. The latter should be useful for our new women's studies module which I am to co-ordinate next term. We must be sure that the module does not have white, middle-class women as the centre-piece.

Some of the most exciting intellectual developments today are in women's studies. If ever there was a knowledge revolution, this is it. But it is confined to too few. Feminist writers are shaking the conceptual frameworks of many disciplines while the guardians of knowledge sleep and ignore what they say. It cannot continue.

WEDNESDAY

Sleep! I wanted to write kept thundering through my head. I should have got up and written then down, rather than wondering when I would fall asleep. Arose feeling very sluggish and decided to write to a friend. Then marked a host of student essays.

Began thinking about equal opportunities at the play and wrote to our new director. He looks a decent sort of chap and will, I hope, be interested. After all, he has worked with Joan Lestor. I am to chair this committee on equal opportunities in

our faculty, and I need his support as it is not a faculty issue but a policy issue. Where to begin in drawing up an equal opportunities policy and, more importantly, implementing it, is no easy matter. But it must be done. How I wish Sir Keith would issue a directive on it. What a contribution that would make to English education.

Meeting of the women's studies module planning committee in the afternoon. It is good to see so many prospective students there.

In many ways, I am quite impressed with this polytechnic. Students are invited to sit on course planning committees and express their views. They are also involved in sessions devoted to the evaluation of each module, after it has been taught. Why is that not common policy in higher education? I'm sure Sir Keith would approve. That man is too much in my thoughts today.

THURSDAY

Driving into work at 8.30, singing loudly to the radio. And what do I do? - I slide crumpling into the back of the big Volvo which suddenly stopped as it was doing a right turn. A woman emerges and hastily tells me it is my fault. That is little consolation. I say very little while we exchange addresses, and even less as I look at my badly dented bumper and bonnet. I must have been doing one mile per hour when it all happened. I wondered what that noise was.

Made my 9.15 publicity meeting in something of a daze. Then off to teach and see a student. I emerge for coffee and decide I must rescue my busy lizzy, geranium and pot pourri. They are found all quite safe and placed in their new home, on the top of the filing cabinet by the shower. After teaching in the afternoon, I hang around for the photographer since he wants to take some snaps for a poly brochure. Five students stay with me and we simulate a tutorial situation, laughing and joking about various things. My outward appearance conveys nothing of my inner turmoil. I retreat home and put my car in the garage. It looks so sad, poor old thing. Once in the house, I need some music and wonder whether to listen to *The Messiah*, *Lionel Richie* or *La Bohème*. Mimi and Rodolfo win: act two, scene one. Could one convey the same intensity of feeling in words? I am both uplifted and drained. Glad to immerse myself in writing for the rest of the evening.

FRIDAY

For much of the morning, I am interviewing prospective candidates. I don't show them my shower. Nor do I expose the airing cupboard which has a "Jesus saves" sticker on the door, a reminder of the previous occupant. In the afternoon, I give a lecture on symbolic interactionism and social phenomenology on the "ethnography and schooling" module. I really enjoy lecturing. But it is like a performance, a piece of acting, an overview of a topic, eg. handouts, structured discussion. But I always come back to the lecture. Students seem to like it.

Once back home, I decide to face the crowds at Tesco for the weekly shopping. There is nothing like pushing a shopping trolley around a busy supermarket on a Friday night to remind one of the basic realities of life. Some small children are crying. Some adults are running around with calculators, adding up all purchases starting at the time of beans and weaving up and down each aisle. I like the order and predictability of it all and get quite annoyed when a product is removed from its usual place. After the shopping is unpacked, there are clothes to soak for washing. Retreating into my study would fall asleep. Arose feeling very sluggish and decided to write to a friend. Then marked a host of student essays.

Began thinking about equal opportunities at the play and wrote to our new director. He looks a decent sort of chap and will, I hope, be interested. After all, he has worked with Joan Lestor. I am to chair this committee on equal opportunities in

June Purvis

The author is senior lecturer in educational studies at Oxford Polytechnic.

Portrait of the artist as a dyslexic

by Carolyn Dempster

Leonardo da Vinci was only too well aware of his inability to express himself in the written word, calling himself "omo senza lettere" - man without literary ability.

But new evidence, presented by neuropsychologist Dr Giuseppe Sartori of the University of Padua at an international conference on "Reading" at Leicester University last week, now suggests that Leonardo was in fact suffering from a writing disorder akin to dyslexia, called surface dysgraphia.

The thousands of notes he wrote on topics varying from optics to mathematics, ballistics, mechanics, anatomy and the parabolic path of the missile, are riddled with spelling and homophonic errors. Not only this, but the pages are written from

right to left in a mirror script, resulting in the analysis of his spelling as "bizarre and singular", "by ear", and "unusual and inconsistent".

Surface dysgraphia is a disorder of spelling observed either following damage to the left hemisphere of the brain, or as a developmental disorder in subjects who have not achieved competent writing.

Could it have been because Leonardo was left-handed? No, said Dr Sartori, because there is evidence to suggest that Leonardo read as well as wrote phonologically, using rules for converting sound into print. He made spelling errors even when copying material.

Whether Leonardo acquired the disorder due to brain damage or developed it is still open to speculation.



Governors warn principal

by Olga Wojtas
Scottish Correspondent

The principal of Scotland's only adult residential college, whose academic staff unanimously passed a vote of no confidence in him last summer, has been given a verbal warning following a governors' inquiry.

The staff move followed the discovery of a projected deficit of £40,000 when Newbattle Abbey College's senior tutor took over as acting principal while Alexander Reid was recuperating from an operation.

However, the Scottish Education Department, the college's prime funder, says Newbattle will have no deficit for 1985/86. The board of governors made great efforts to reduce the deficit, and the SED gave some assistance for specific projects, a spokesman said.

Mr Reid himself has refused to comment on the governors' warning or the deficit, but Mr John Henry, deputy general secretary of the Scottish Trades Union Congress, and a member of the six-strong committee of

inquiry, confirmed that Mr Reid received a verbal warning last term. But he added: "Least said, soonest mended. I wouldn't want to make any comment whatsoever."

Mr Callum Anderson, who became chairman of Newbattle's board of governors last November, said the deficit had been a greatly exaggerated situation, and the college was not under any particular threat or difficulty.

A meeting is planned in May between the governors and the Scottish Office minister for industry and education, Mr Allan Stewart, to discuss the college's budget for the coming year, he said.

Mr Anderson said the governors had held meetings with the principal and staff and that "most of the problems which were presented are now over". There was now a much clearer spirit of co-operation in the college.

But some academics, who do not wish to be identified, have told *THE TIMES* that there is still unhappiness over the way the college is being run, and that problems remain unresolved from 1983, when an HM Inspectorate

report called for "forceful and determined leadership" which would command support and enthusiasm from staff and students.

There is also still uncertainty over the future of the college's open access unit, set up 15 months ago, following the resignation and non-renewal of its last term of its director, David Geer.

Last summer, Mr Geer told the governors that the principal had been "irresponsibly premature" in appointing him, and claimed the unit did not have the financial backing he had led to expect at his interview.

The SED has said it would expect the unit to be self-financing, and that it had given it funding for pump-priming, not to pay the director's salary.

Mr Anderson said the unit's future would be one of the matters to be discussed with the SED next month. "There is quite a strong view that it may be less appropriate to reappoint a director than to look at other ways of preparing open learning material," he said.

Leeds loses rights of nomination

by Peter Aspdon

Leeds University is no longer to be invited to nominate governors of maintained schools within the Leeds local education authority area.

The authority has reorganised governing bodies throughout the area to conform with Government regulations on parent and teacher composition - and it has decided not to include any co-opted governors.

The university presently has about 90 co-opted representatives on governing bodies. The vice-chancellor, Sir Edward Parkes, criticised the authority's decision in a letter to the chairman of the education committee, Mr Geoff Driver, saying that the university had always taken its responsibility to local schools very seriously.

He said the decision to exclude university representatives was "not simply a break with a very long tradition, it is a development which seems to us detrimental, both to the schools and to the university".

The committee which nominated representatives was very broadly based and took considerable care in selecting its nominees to ensure they were independent and conscientious.

"University-nominated governors have a deep concern for the schools which they serve. Many have become chairmen of governing bodies. They are recognised as having an independence of approach to issues and are thus a source of considerable strength," he said.

But Mr Driver, in his reply to Sir Edward, said the authority was "naturally concerned" that the formation of the new governing bodies should adequately reflect the community and the council.

"It was with this in mind that the balance of membership established did not include at this stage any co-opted governors," he added. The authority would assess the situation at the end of the first year and decide on any revisions should they be necessary.

Scots unions back women

by Olga Wojtas
Scottish Correspondent

Better opportunities for women in education and training have emerged as a large concern in motions submitted for next week's Scottish Trades Union Congress in Aberdeen.

The Association of University Teachers (Scotland) has called for a restoration of cuts in higher education places in arts and social science, which have a traditionally high female participation rate, and has added that women should be encouraged to apply for places in science and engineering, supported by conversion courses and additional tuition in first year for those who have not obtained the relevant school qualifications.

The AUT(S) also urges co-operation between higher education institutions and education authorities in promoting access for women to tertiary courses.

The Amalgamated Union of Engineering Workers' Technical, Administrative and Supervisory, Management positions. It calls on unions to investigate the position of women in their own industry, "with a view to improving women's access to training programmes, as this would undoubtedly help equip women for positions of responsibility".

But it adds that the limitations in opportunities for women in areas such as industrial design and computer sciences will not be overcome simply by "a short burst of sustained effort".

If there are to be equal opportunities in education and training, then cuts in educational provision, reductions in training places, and the Government's direct attack on the principle of providing subsidies for training must all be fought, it says, and calls on the STUC general council to co-ordinate a campaign to reverse these policies.

The Scottish secretary should reverse "the very serious and escalating underfunding" of higher education irrespective of policies south of the border, adds the AUT(S).

existed for more than 15 years, only a very small proportion of women are coming into supervisory and management positions. It calls on unions to investigate the position of women in their own industry, "with a view to improving women's access to training programmes, as this would undoubtedly help equip women for positions of responsibility".

The AUT(S) is also urging the Secretary of State for Scotland to implement recommendations from the Scottish Tertiary Education Advisory Council to protect the broad-based Scottish educational tradition, adopt the most favourable predictions of future demand for higher education, and encourage recruitment to higher education from a wider section of society.

The Scottish secretary should reverse "the very serious and escalating underfunding" of higher education irrespective of policies south of the border, adds the AUT(S).

Mother and baby Indonesian pig-deer (Dabirusa) doing well at Jersey Zoo in the care of the Jersey Wildlife Preservation Wildlife Trust. A diploma in endangered species management is to be awarded by the University of Kent to students who train with the trust.



'Social cut' attacked

A call for local authorities and Government departments to stop the National Advisory Body from radically cutting social work courses has come from the central body for social work training.

Mrs Patricia Young, director of the Central Council for Education and Training in Social Work, says in her report to the council that only a public enquiry will stop the NAB's proposed 17 per cent reduction of social work courses.

"The parties likely to be most influential are of course the local authorities, and I do not mean just the social services committees, and the Government departments with a direct interest in the social services, that is the Department of Health and Social Security and the Home Office," Miss Young said.

She pointed out that the council had done everything to stress the importance of maintaining social work courses and would continue to do so. But apart from that there was little more that could be done. Indeed as far as NAB was concerned any further direct intervention in the planning process would be counter-productive.

"Given that a growing proportion of those holding a qualification are going into the residential sector and that our estimate is that only 22 per cent of staff in residential services are qualified, it seems likely that the worst damage will be in this area, with the gradual build up of qualified staff stopping, and probably beginning to decline," she said.

Mrs Young said that she had received welcome reassurances this month from the Committee of Vice-Chancellors and Principals that it attached value to the continuing role of universities in the education and training of social workers.

CNAA plea on disruption

The Council for National Academic Awards has urged polytechnics and colleges of higher education to take into account the disruptive effects of the teacher's dispute when applying selection criteria this year.

A letter from Dr Edwin Kerr, chief officer of the CNAA, circulated to all polytechnics and colleges offering CNAA courses in March, suggests that CCE and CSE grades are likely to be "unreliable as a guide to a student's real potential for higher education", as a result of the effects of the dispute.

Dr Kerr recommends that while the CNAA does not want to see entry standards lowered, institutions should use their discretion to admit students without the relevant qualifications - where it can be proved that the individual would otherwise satisfy admission criteria.

The CNAA advice complements action already being taken by the Polytechnics Central Admissions System, Central Register and Clearing House, and the Art and Design Admissions Registry, and follows the Universities Central Council on Admissions initiative in February.

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Peter Aspden and Ngaio Crequer report from the CUA in Cambridge

Jarratt 'a return to 1950 traditions'

Clamping at the bit . . .

The Conference of University Administrators this year met at Cambridge, whose picturesque Queens' College was the star of a recent television series.

But stardom has its hazards, as witnessed by the stampede of delegates during the first session from the main conference hall, towards a Queens' courtyard where they had illegally parked their cars.

The college, expecting an unprecedented influx of tourists this season, has just acquired a brand new set of wheel clamps, and was simply dying to try them out.

The CUA conference also produced a new gloss on old phrases. According to Ken Davies of the Committee of Vice-Chancellors and Principals, "He noted what he had done, and saw that it was good." Is the first known example of performance indicators and self-assessment. And Ian Beesley, head of the Cabinet's efficiency unit, confided that bureaucracy, confronted with the nursery rhyme about *Ranunculus Pungens*, whom all the king's horses and all the king's men failed to put back together, would simply say: "It just goes to show you need more horses and more men."

Mr Beesley also used Philip Larkin in evidence. In 1984 Larkin wrote: "Some 20 years ago I fancifully proposed that English society has always included a kind of sleeping bag for those members of the educated middle class who do not want to work. First it was the monasteries, then the Court, then the Established Church and the civil service, and now the universities."

Mr Beesley revealed that when he had first used this quotation Mr Geoffrey Lockwood, Sussex University registrar, had objected "on the grounds that he had spent some of the best times of his life in sleeping bags."

Gender blender

Fresh from its recent success in passing motions both supporting a single tertiary planning body and viewing it with grave suspicion, the Association of University Teachers (Scotland) has indulged in some more wire-crossing in its motions to the Scottish Trades Union Congress.

Its first motion urges greater representation of women in higher education courses. ASTMS, however, has gently suggested that in the second AUTS motion, the words "qualified manpower" should be amended to "qualified workforce".

You have been warned . . .

One of the highlights of the *Hamilton Advertiser* is the Westminster Diary written by local Labour MP George Robertson. Last week Mr Robertson turned his attention to Sir Keith Joseph, whom he admits is a sensitive and sincere human being. But he adds that this does not stop him being "a mind-boggling disaster," and further claims that Sir Keith, when in charge of industry, could barely recognize a screwdriver.

"Now this nice but totally barmy man is in charge of the nation's education system, and the depth of the disaster he represents is only now being recognized."

Remember, George Robertson told you first.

Hot air?

An ability to chair court meetings is clearly not the sole criterion for electing rectors at St Andrews University. Former rector Tim Brooke-Taylor was winched down by helicopter for his installation; his successor, Katherine Whitehorn, disembarked from a 37-foot launch. The latest incumbent, Stanley Adams, was this week expected to arrive by balloon.

The registrar of Sussex University, Dr Geoffrey Lockwood, has rubbished claims that the Jarratt report on efficiency in universities is an excuse for further Government spending cuts in higher education.

Dr Lockwood, who was a member of the Jarratt committee, told members of the Conference of University Administrators in Cambridge that the report defended universities by saying they were efficient. "I don't know why people don't make more of this," he said.

"The report is not a political imperative or directive - it has had far too high a profile, although its recommendations should be taken on board. It is rubbish to say it has imported ideas from industry. There is not one thing in there which is not current practice in one or more universities."

The implementation of the Jarratt proposals was a main theme running through this year's CUA conference. Dr Lockwood, speaking at the closing plenary session, said it was a mistake to think of it in terms of a conversion to Rambo-style university government. The parts which emphasized the participation of external lay members in university affairs would have seemed very conservative to anyone reading the report in the 1950s. "The report is a return to traditions which were overridden temporarily in the 1960s," he said.

A more radical view of universities was offered by Dr Digby Anderson, director of the social affairs unit, who

Wiles, lies and good lunches for visitors

The wiles of universities, desperate to squeeze more money from the University Grants Committee, were exposed at a conference session on UGC visitations.

The ungentlemanly practices were revealed by Professor Keith Clayton, former vice chairman of the committee, who said many of the ruses were as obvious as they were unconvincing. They included one university which pleaded bankruptcy - having just put £2 million in its reserves and another institution in which the visitation was interrupted by a member of staff walking in "spontaneously" to say there was a shortage of library books.

Mr Ken Davies, a member of the group and assistant secretary of the CVC, said a number of universities already used performance indicators but there was no uniform pattern. The group had considered a large number of indicators and though the list was not finalized he offered a

selection currently being seriously considered. For teaching these were: undergraduate wastage rate; destination of graduates; cost per graduate; postgraduate and professional training; student questionnaires; rate of return to degree.

For research they were: analysis of publications; citations; research income; number of research students; submission rates for research degrees; external academic appointments of staff (ie, editorship of learned journals, membership of research councils).

The working group had devised a common test for performance indicators.

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The working group had devised a common test for performance indicators.



Alan Soutter's drawing for the conference handbook

Don't lose momentum says efficiency chief

It would be "wicked" to let the momentum for change created by the Jarratt report run out, said Mr Ian Beesley, a member of the Cabinet's Efficiency Unit.

Mr Beesley told the CUA he had recently toured some universities, talking mainly to academics, rather than administrators. "I found a divergence between the willingness of people to talk about their aspirations and what is wrong, and their reluctance to do that outside a room on the university campus - a reluctance of the university collectively to talk other than in slogan terms."

He said he had been disappointed by the slowness of universities to face up to the issues. The University Grants Committee had not asked universities to respond until September 1986 and the Committee of Vice-Chancellors and Principals did not discuss Jarratt until six months after it had reported.

"To those outside there is a contrast between the urgency of doing the work and what has to be done that is not flattering."

He hoped that the May letter to the universities on recurrent grant would not take the heat off Jarratt. "On the down escalator will be galvanised and the rest may breathe a sigh of relief and carry on as before."

"Key management decisions should be taken by academics. It is threatening to take things away from the core. The role of the administrator is one of staff officer, doing the synopses, writing the papers and preparing the minutes."

Mr Beesley also revealed some of the conclusions reached by his unit. It is instructive to ask people how they assess their own performance. Be aware of costs. Be clear about responsibilities and know what people are expected to do. Be clear on information and procedures. Be flexible; ensure a balance of efforts; consider use of assets; think about leadership.

Miss Rosemary Graham, assistant registrar at Warwick who worked for the UGC on a two-year secondment, advised organizers of visitations not to hold back on the hospitality in an attempt to plead poverty. She quoted the words of a former UGC chairman, who used to say: "A good dinner never did the grant any harm . . ."

Then there was the registrar who made up obscure UGC rules to keep his own staff at bay, whose cover was blown by a visit from the committee who explained the truth of the situation.

Professor Clayton said the visitations of the main committee and subject subcommittees were useful exercises in getting to know institutions. "The committee can appear too distant and uncaring - it often surprises people to know that UGC members are worried about the situation as well," he said.

He told CUA members that universities were much better now at formulating academic plans. "In 1974, it was very rare for an institution to have any idea where it was heading; as late as 1981, vice chancellors were asked point blank at Park Crescent what their universities' plans were. Not only were they astonished to be asked, but they were quite unable to reply."

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Polys issue free speech code

by David Jobbins

Polytechnic directors are to issue a code of practice on freedom of speech designed to safeguard the right of speakers with unpopular but lawful opinions.

But they have followed the lead of university vice chancellors and reserved the power to refuse permission for meetings on polytechnic premises which could lead to a breach of the peace.

Some Conservative MPs have complained that this amounts to an unexplained loophole in voluntary safeguards for free speech and have argued that legislation is needed.

Under the code, directors could ban meetings if they feared damage to either the good name or the fabric of their polytechnic.

It embodies powers already held by most polytechnics and is designed to minimize the risk of disturbances which have characterized visits to

universities by controversial Conservative MPs in recent months. Polytechnics have been largely free of such incidents and it seems unlikely that they would have produced the code had they not been asked to do so by Sir Keith Joseph, Secretary of State for Education and Science.

Students will be required to give a written undertaking when they enrol that they will not disrupt meetings or engage in similar action and will be subject to disciplinary action.

Polytechnic premises would be made available only to organizers who agree to accept guidance from the authorities on the location and conduct of meetings. Permission would be conditional on advance notice being given of an intended outside speaker.

One of the problems faced by the directors in drawing up the code has been their legal position over control on the use of polytechnic premises. These are owned by local authorities

and directors would feel obliged to consult with governing bodies and education authorities before taking action over a potentially risky meeting. This could prove a protracted process particularly for Middlesex and North East London polytechnics where more than one local authority is involved.

The code was approved by the Committee of Directors of Polytechnics at its annual conference in Leeds this week. Retiring chairman Dr Harry Law of Portsmouth Polytechnic said: "The emphasis is that one should attempt not to use the reserve powers in a way which would restrict freedom of speech but as a reserve against breaches of the peace."

● Polytechnic directors are to consider setting up a group purchasing consortium, probably operating through the Polytechnic Finance Officers' Group. They also wanted to explore centralized publication of statistics and the distribution of prospectuses.

No-platform unions 'risking funds'

by Carolyn Dempster

Student unions who continue to support "no platform" policies in defiance of the democratic precepts which freedom of speech demands should beware having their access to public funds curtailed.

This was the implied threat by parliamentary under-secretary of state for education, Mr George Walden, during a speech to the House of Commons last week, although the confirmed that legislation on the freedom of speech issue was unlikely.

Mr Walden warned that to deny an individual a platform was more than an attack on freedom of speech. "It is a betrayal of the values on which a democracy depends," he said. Students who obtained union office had to consider their positions very carefully, especially when confrontation

was precipitated by "no platform" policies, when no lead was given in opposing undemocratic action or violence on campuses and where union leaders themselves refused rational discussion with ministers.

Mr Walden censured the Committee of Vice-Chancellors and Principals for not taking a tougher stand against the attacks on freedom of speech which have resulted in physical confrontation.

In December the CVC issued a set of guidelines, which, charged Mr Walden, contained a loophole in that the CVC stated "there may be cases of very high risk when universities may have to use their right of refusing permission for the holding of violently controversial meetings in university premises".

The danger, argued Mr Walden, lay in "the erosion of freedom of speech by default". "It is regrettable that the guidelines contain no clear and specific suggestion that university authorities should ensure that speakers are not refused a platform by their student unions."

Mr Walden praised York University for its legal stand against the adoption of a "no platform" policy by its student union and suggested that other institutions should be prepared to take similar vigorous action.

The issue is liable to be debated again in full when the private member's bill introduced by Conservative MP Frederick Silverman comes up for its second reading on May 9, "to clarify the law so that the state of disorder, mainly at political meetings, particularly in student unions, can be prevented in future".

Pressure on Bart's for link-up

London University medics have formally supported the plan to establish a new pre-clinical school in East London with the full participation of St Bartholomew's Hospital Medical College. They voted by nearly three-to-one for the BLQ scheme - a link-up between St Bartholomew's, the London Hospital Medical College and Queen Mary College - at a meeting of the university's joint medical committee.

A move by St Bartholomew's, who pulled out of the scheme last year, to delay further discussions on the topic was defeated by the same margin.

The committee decided that the BLQ plan, with an entry target of 200 medical and 55 dental students, was the best way to proceed, "taking into account the consequences for all the institutions".

The plan, which would establish a new school in Mile End Road, already has the support of the University Grants Committee and the Association of University Teachers; now the medical decision is bound to increase the pressure on St Bartholomew's to conform to the scheme.

The medical committee said that even if the move went ahead, the university should "use its best endeavours" to ensure the continued use of the Charterhouse Square site belonging to St Bartholomew's, possibly for other medical or paramedical functions.

But that is unlikely to appease the opponents of the BLQ scheme at St Bartholomew's. They favoured the construction of a smaller school in East London, taking 100 medical and 55 dental students, while the remainder would stay at Charterhouse Square.

But that plan, which envisaged a stronger "co-operation" between the two institutions, was not put to the vote at the medical committee meeting, in view of the success of the earlier motion in favour of BLQ.

The plan is now due to come before the London University senate in May. It already has the personal support of the vice-chancellor, Lord Flowers.



Queen Mary College's centenary fair, designed to show current research activity, was visited by Mr George Walden, under-secretary of state for education seen talking with Professor William Bonfield, dean of the engineering faculty.

Women fight for widowers

Women activists in the university lecturers' union are to keep up the fight for husbands of colleagues who die before retirement.

Demands for renewed pressure on the Universities Superannuation Scheme to grant pensions to widowers of university academics is to come from the annual women's meeting of the Association of University Teachers in Birmingham today.

A ballot of scheme members rejected equality between widows of male academics and widowers by 14,000 votes to 11,800 earlier this year. But only 46.5 per cent of scheme members voted in the ballot, which followed a substantial poll within the ALT in favour of the change, which would have meant increased contributions. Barely a fifth of scheme members supported the move - and the women's meeting will decide today whether to press for another ballot.

The issue tops the list of motions for debate, with four separate moves by the University College London, St Andrews, Glasgow and Birmingham.

The continuing theme of the Convention is *Survival in the nuclear age: towards common security*, and covers the future prospects for arms control.

The Conversations are held under

Edinburgh talking to Russia again

The Edinburgh Conversations, annual informal meetings between British and Soviet experts, have resumed this week, six months after the Soviet team pulled out of the planned meetings following the expulsion of 25 suspected Russian spies from Britain.

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'Whingers' told: 'Cash is available'

by Nina Hall

Science Correspondent

University scientists should stop whinging about lack of government funds for research and seek financial support elsewhere. According to Dr J. Frazer Stoddart, a reader in chemistry at the University of Sheffield, there is plenty of cash available if one is prepared to go out and look for it.

Dr Stoddart told his colleagues at the annual congress of the Royal Society of Chemistry at the University of Warwick last week to pull up their socks. If an academic from a red-brick university like himself, who was not a professor, not a Nobel prize-winner nor an FRS, could raise £2 million over two years for fundamental research in chemistry then so could others.

In recent months several top scientists have complained bitterly in the press about the uncaring attitude of the Government towards science as reflected in inadequate funding. Indeed, phrases such as "the dismantling of the British science base" and "an impending brain-drain" have been on the lips of many, including research council members. Dr Stoddart asserts that this is not the way forward for British science.

"Senior academics who talk in this defeatist language have succeeded only in destroying morale in their own departments. They and the glibbie journalists who eagerly report their utterances must together accept much of the responsibility for the decline of British science," he said. "Government has undoubtedly shown great ineptitude, but self-inflicted wounds

have done the real damage."

According to Dr Stoddart, now that industry is recovering, it has the money to spend on new research via industry-university link-ups. The City is now offering venture capital for fundamental research.

Dr Stoddart advocated that:

● Scientists should be encouraged to get a couple of years industrial experience before embarking on an academic career.

● Tenure should be abolished and salaries should be put on a merit basis.

● All academics should be called professor as in the United States, thus dealing a welcome blow to the class system that operates in British universities.

● All promotions should be competitive on a national basis as in Italy. This

would encourage the much needed movement of academics between universities.

● All support for studentships from research councils should be justified by research reports.

● Research council committees should include a much higher proportion of industrial and non-academic scientists.

● Industry should support more academic research.

● All students should change universities between first and second degrees as in the US.

● PhD students should be trained in a more demanding and flexible manner. Course work that counts should be part of the training; failure should be a real possibility for weaker candidates.

Transition college praised

The College of St Paul and St

Cheltenham has successfully made

transition from a teacher training

college to a BA degree in combined

science and geography/geology.

The inspectors commended the

college for the diversification of its

recruitment of staff, staff devel-

opment, research, the extension of

curriculum and other resources to

provide a framework for two

courses as it moved from an under-

graduate to an honours degree.

As a consequence, students have

access to an experience of higher

education comparable with that at

many larger institutions," the

report says.

The BSc in geography/geology

commended for its clear structure,

strong practical emphasis, range of

teaching styles and planned pro-

gression in the demands made upon

students.

The content of some geology

units should be reviewed but overall

is a high quality course.

The BA combined studies' standard

of work is, according to the inspectors,

satisfactory. Its first honours students

have yet to graduate but the academic

qualifications of entrants are improv-

ing every year.

The only criticism is that students

could be encouraged to adopt a more

intellectually adventurous approach in

all subjects.

On both courses staff are aware the

students could be helped to make

closer links between different subjects

and examples of good practice could

be shared.

Many teachers have a strong interest

in teaching methodology and make

critical appraisals of their own

teaching.

YTS employers attack trainees' 'low wages'

An independent report on the Youth Training Scheme shows that although employers are generally satisfied with the scheme, many are highly critical of the trainees' small allowances and the shortage of permanent jobs for them.

The report, financed by the Economic and Social Research Council, was produced by Dr Paul Chapman and Mr Michael Toole of Dundee University's department of economics. It is based on a sample of 100 employers in two Scottish regions, but is relevant to a much wider area since a number were also providing training in many other parts of Britain.

The report shows that just over half the trainees were offered and took jobs at the end of their training, and that about 70 per cent of them

took up vacant jobs which could also be filled by people who had not been on the scheme.

The report also concludes that the likely effect of the New Workers Scheme announced in the budget is to increase the potential for young people to displace other workers for employment. It claims that the scheme is "little more than the former Young Workers Scheme travelling in disguise. Employers who create full-time jobs for young people are now to receive a subsidy of £15 per week for a year for 18 to 20-year-olds instead of just 17-year-olds."

Copies of the report may be obtained from the Department of Economics, University of Dundee, DD1 4HN, priced £10.



Leicester Polytechnic painting student Alison Derry hanging an exhibition of her work with the help of Leicester Trustee Savings Bank manager Keith Smithson. Alison is this year's winner of a TSB £300 travel award.

Split NUS faces critical year

by David Jobbins

The National Union of Students is to enter a critical political year with its leadership split down the middle and the official Labour student organization stripped of its control.

Elections held during the NUS annual conference in Blackpool have deprived the National Organization of Labour Students of an overall majority on the executive although most of the 20 seats are held by Labour party members.

After last week's decisive election of Mr Vicky Phillips as NUS president especially when it retained control of the powerful post of national secretary, Mr Adrian Long, was also successful when it seemed he might be beaten by a Left Alliance candidate.

But the wholesale desertion of NOLS delegates from Scotland from with NOLS was not contesting gave the sensitive job of welfare vice president to Mr Simon Pottinger of the

Socialist Organizer-backed Socialist Students in NOLS group.

SSIN has emerged as a growing focal point for opposition to the democratic left leadership of the official party organization for students, which has

held control of NUS since 1982. SSIN also gained two of the 12 part-time seats on the executive while two of the three seats won by the left alliance are held by Labour party members who choose to operate outside NOLS.

The election of a single supporter of the Socialist Worker Students Society to the executive also represents a

face a year with a home executive and they had not secured the newly created full-time post of vice president for further education, which was captured by Mr Gordon Acher.

NOLS entered the ring knowing it was already one down on the new executive, having lost the presidency of NUS Wales to a Liberal standing for the left alliance last month. But its key

organizational mistake came when it failed to get one of its four part-time candidates elected in the first round of voting.

The final breakdown is: NOLS, 10 seats including the presidency, the Scottish presidency and four other full-time posts.

SSIN has three seats including one full-time post; the left alliance four - two Labour and two Liberal; the Socialist Democratic party one; SWSS one; and one independent.

For the first time there is a majority of women on the new executive - 11-9. Ms Phillips is only the second woman president in the organization's 60-year history.

Exceptionally, the new vice president for education, Ms Liz Sewell has a polytechnic rather than university background.

The old executive, on which NOLS has a clear majority, runs in tandem until July with the ones elected last week.

Support for design initiative

A Government minister this week gave his backing for an initiative aimed at putting design management in with other key skills as part of industry's competition weaponry.

Mr John Butcher, under-secretary for industry, described a pilot project led by the Council for National Academic Awards to encourage polytechnics to run courses in the subject as a vital step towards making managers more conscious of the need to manage design.

"The pilot courses are part of the essential groundwork to help us to rig a position where we have the right educational infrastructure," he told a CNAA seminar in London.

A CNAA working party two years

ago recommended inclusion of design modules in polytechnic business and management courses. Postgraduate courses have begun at three

polytechnics. Kingston, Leeds and Leicester. Three more are due to start soon, at Bristol, Middlesex and Humberside College of Further Education.

The Department of Trade and Industry has contributed £50,000 to the project to cover the first two years of its implementation.

Mr Butcher said that research had shown that Britain's relative weakness in design performance stemmed largely from management's failure to use the designer as an effective part of the business team. Managers almost instinctively looked to cash flow, sales levels and profit margins.

Bradford scientists weather the storm

Scientists at Bradford University are set to make a breakthrough which will affect one of the favourite talking points of the British public - the accuracy of weather forecasts.

Professor Peter Watson and Mr Pedro Baptista, from the school of electrical and electronic engineering,

have been developing new radar equipment which will be able to distinguish between heavy rain and snow, a notorious point of confusion using current equipment.

The new apparatus, which has been devised with the help of the Rutherford Appleton Laboratory in Oxford-

shire, features an 80-foot diameter dish antenna which gives a very high spatial resolution and uses two polarizations instead of one, the new technique should also enable the amount of water falling in a given catchment area to be measured more accurately by radar.

PM sacks advisers

The Prime Minister's Information Group created five years ago to advise her on communication technology has just been killed off while still giving birth to its final report on electronics in education and training.

One of the six scientists comprising ITAP (Information Technology Advisory Panel) said the report had been extremely difficult to produce.

ITAP has brought forth two important reports: on cable television and on selling information technology such as on-line databases.

Whether the final ITAP report will be published by Mrs Thatcher is not yet known. It is, however, highly critical of the current development of "new technology" in education.

overseas news

Finnish historians unhappy at hint of censorship

by Donald Fields

Finland's foreign minister, Mr Paavo Väyrynen, has created a stir by effectively suggesting that scholars toe an official line in their work.

He told historians that they should safeguard the national interest and not necessarily reveal all they discovered in their research. Asked by Professor Osmo Jussila of Helsinki University how academics could know

what constituted the national interest, and who defined it, Mr Väyrynen replied: "Either one knows it, or one does not."

The minister's discourse to the Finnish Historical Society was delivered from written notes. The

foreign ministry press section, normally assiduous in releasing dignitaries' liturgical speeches, has made no copy available. Some observers see the intervention as only a step removed from censorship. The Finnish practice of self-censorship has been diminishing of late but still lurks just beneath the surface.

Neutral Finland's delicate position on the Soviet borderland determines an overall mood in which political parties have attempted to impose their views on primarily academic debates, and to mould the media to their purposes. All are more or less equally guilty in this respect, but especially visible is the role played by

the Centre Party (formerly Agrarian League), which is chaired by Mr Väyrynen.

Behind the Väyrynen call some detect the hand of a fellow-Centrist, Mr Juhaani Suomi, a senior foreign ministry official, who is working on a biography of former president Urho Kekkonen. This is expected to be a eulogy, for he is collaborating with the president's surviving son Matti, who was instrumental in stopping the publication of memoirs in which

highlight sheds a less favourable light than usual on his father. The latter were written by Hans Metzger, Nazi Germany's wartime press attaché in Helsinki.

Mr Väyrynen is only one of several politicians to have expressed misgivings over the publication of the diaries of the man who steered Finland through its most critical post-war period, J. K. Paasikivi, president from 1946 to 1956.

Unlike present politicians, Paasikivi did not mince words about the Soviet Union if the occasion demanded. His successor Kekkonen deemed Paasikivi's diaries unfit for publication. The present president, Mr Mauno Koivisto, whom Mr Väyrynen wishes to succeed, appears more benign despite some odd views he has expressed on the workings of the media.



Foreign minister Paavo Väyrynen

Row over disciplined lecturers

by Geoffrey Parkins

Disciplinary action by the University of Stirling against two lecturers - who are academic staff association leaders - for criticizing its administration and the lack of academic freedom

has provoked wide and angry public condemnation across the country. One was dismissed and the other had her salary substantially reduced together with a recorded warning.

The two lecturers, it is being argued, have in fact been punished for carrying out their proper duties as staff association officials expressing the grievances of members.

The university's disciplinary board, chaired by vice-chancellor Professor

Ishak Thanby Chik, found Enick Hussein Yacob, who is USM academic and administrative staff association president, guilty. He was subsequently dismissed for contravening the Universities and University Colleges Act by making public statements critical of the university's administration.

Miss Ruan Rohana, the association's vice president, had her salary reduced by two increments and was

officially warned after being found guilty of irresponsible actions detrimental to the university's policies and image by her public support for Yacob's criticisms. Both lecturers are to appeal.

Opposition politicians, academic and non-academic associations and unions including the amalgamated union of employees in government, clerical and allied services and the national union of journalists have condemned the USM board's actions as "outrageous, vindictive and ominous", and have called on education minister

Abdullah Badawi and the university's council to intervene and revoke the disciplinary board's decision. However, Mr Badawi has refused to become involved.

In a joint statement, the chairman of the institute for social analysis, Dr

Mohamad Nasir Hashim, and its director, Dr K. S. Jomo, have charged that the USM disciplinary board had "violated standards of justice and

blemished the reputation of Malaysian universities".

The board's decision, said the statement, had clearly shown how the excessive powers provided by the 1979 disciplinary regulations under the Universities Act (amended 1975) could be used by "cliques" in positions of authority to find "scapegoats and seek

vengeance".

The university community has been regularly assured by the government that implementation of the legislation concerning discipline would never be abused, but the USM board's decision had now publicly exposed this as a

fiction, said the institute.

More specifically, it was argued that in the case in question, there was not an honest attempt to ensure that justice prevailed, and the university had only gone through the motions of a board inquiry.

The whole issue has added further weight to the university academic staff association's case for being granted union status and representation for all academic staff that would give them the means for negotiating conditions of service and airing their grievances.

Chirac opts for right-winger

from David Dickson

PARIS

In a move which suggests future tensions within the new conservative government over its plans for the reform of universities, French prime minister Jacques Chirac has appointed a prominent right-wing activist on educational issues, Yves Durand, as his senior adviser on education and research.

M Durand is a prominent historian at the University of Paris and a vice chairman of the National Inter-university Union (UNI), an anti-Marxist organization which has links with M Chirac's own party, the Rassemblement pour la République (RPR), and the increasingly influential National Front.

The UNI, whose members include both university lecturers and students,

has over the past five years played an active role in organizing demonstrations against the educational policies of the previous socialist government.

It also received considerable attention when it was found to have been receiving substantial funds from a government-sponsored committee in the United States, the National Endowment for Democracy, created by Republican supporters to challenge "totalitarian regimes" throughout the world.

The UNI has already crossed swords with the new minister of national education, René Monory, a member of a small centrist party belonging to the new conservative government, over a statement he made suggesting that he did not want to rekindle the battle over either private schools or universities, nor destroy everything

done by the previous government.

Call for more science spending

from William Norris

WASHINGTON

Alarmed by what it calls serious deficiencies in undergraduate science, engineering and mathematics education in the United States, the policy-making body of the National Science Foundation is calling for huge increases in government spending.

The federal contribution to undergraduate science education is currently less than \$6 million a year. In a report released last week, the National Science Board calls for this to be boosted to \$100 million by 1989.

The report claims that the quality of education in these fields has declined so drastically that universities are no longer preparing students to meet the nation's economic and defence needs.

"Laboratory instruction," it says, "has deteriorated to the point where it is often uninspired, tedious and dull."

Courses and curricula are criticized as being "frequently out of date in content, unimaginative, poorly organized for students with different interests, and failing to reflect advances in the understanding of teaching and learning."

"We cannot afford to allow the deterioration of our undergraduate science and engineering education system to go on unchecked," said Roland Schmitt, chairman of the NSB and senior vice president for corporate research and development at the General Electric Company.

The board estimates that as much as \$4 billion would be needed to replace obsolete and inadequate equipment in America's universities. However, it is not asking President Reagan to go quite that far.

It recommends that \$30 million should be spent on improving instructional equipment, \$8 million for educational research activities, \$13 million to improve the professional qualifications of instructors, \$20 million to support projects to improve laboratory instruction, and \$13 million to improve undergraduate science and engineering courses and curricula.

The balance of the \$100 million would be spent on increasing the participation of minority group students and on collecting data.

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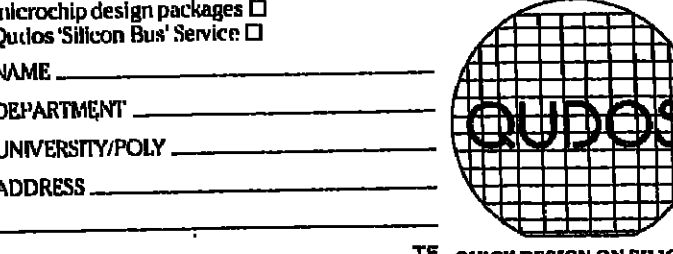
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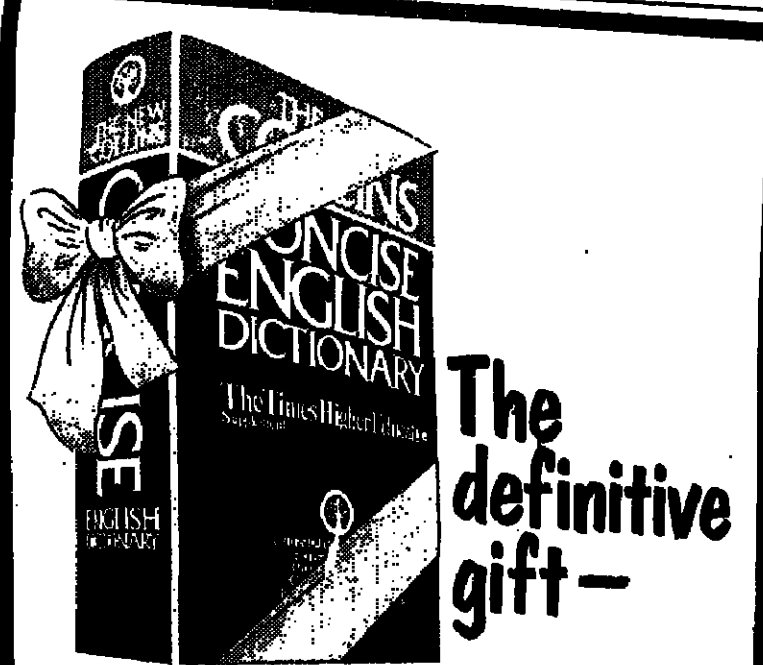
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The definitive gift -

Bulgarian research funds row

Academics at the recent congress of the Bulgarian Communist Party were clearly dissatisfied with the current structure of funding research.

In January, the state committees for science and technical progress and culture were abolished and a new council established. This, says party leader Todor Zhivkov, is intended to "direct science towards education, and education towards science, and the people" - in other words, to facilitate the introduction of new research results in the economy.

For the academics, however, the problem is not so much one of organization but finance. The rector of Sofia University, Professor Mincho Semov, complained that although 29 per cent of Bulgarian scientists and researchers work in the universities, the higher education sector receives only 5 per cent of the science budget.

The answer to this problem would appear to be the recommendation of the "draft theses" of the party programme discussed and approved by the congress, that Sofia University and the Bulgarian Academy of Sciences should be further "integrated in conformity with contemporary criteria and requirements".

Unfortunately, however, the academy is also unhappy about the reform. Under the economic reform of 1983, science funding is tied to research productivity and the solving of problems for the production sector. But instead of the scientists simply accepting contracts from industry and agriculture (as happens with the academies and universities in other socialist countries), in Bulgaria the onus is on the scientists to find practical uses of their discoveries and to try to persuade the production sector to implement them.

Future research funds depend to a large extent on whether or not the scientists are successful "salesmen" for their results. So they are compelled, in the words of academician Angel Balevski, president of the Bulgarian academy of sciences, to "advertise their work and do all sorts of other things which have no direct connection with their job." This, Balevski complained, is a great waste of the scientists' time.

Furthermore, Balevski complained, research is being impeded by the "neo-fundamentalism" of certain bureaucratic who "hide behind inter-departmental barriers" when the scientists put forward some reasonable request or proposal.

Moreover, having carried out the current policy of urging their research results on industry, the scientists are upset when people working in the production sphere claim full credit for the initial discovery.

The party's answer, it appears, is to transfer more responsibility for applied research to industry. Research laboratories are to be established in large plants, and some kind of system can be earned for efficient work in transferring "scientific products" to industry and agriculture.

Although the details of the scheme are unclear, it appears the beneficiaries would be people working in the production sphere who already possess a first degree. Those who earned higher degrees in this way, perhaps, will be less liable to claim credit for the original research effort.



Zhivkov: new science policy

Big rise in college fees

from William Norris
WASHINGTON

The cost of living in America actually went down last month thanks to the falling price of oil - but not the cost of tuition at US universities which is continuing to soar.

Budding students and their families learned to their dismay last week that the price of higher education will rise by an average of more than 7 per cent in the autumn, matching a similar increase last year.

At the top end of the scale, Bennington College in Vermont retains the distinction of being the most expensive. Its 560 undergraduates will have to pay \$16,700, including room and board, bringing the cost of a four-year course to \$66,800.

Other Ivy League institutions are not far behind. Harvard will charge \$16,145 next year, Yale \$16,040, Vassar \$14,580 and Cornell \$15,325. For tuition alone, Princeton is asking \$11,780, Brown \$11,690 and Dartmouth \$11,679.

Many public universities have yet to announce their charges for the coming year - they are typically much lower than the private sector - but the percentage increases are expected to be similar. Because of cuts in federal support, they may be even greater.

It is not coincidental that the new increases are very similar to the recently-announced pay rises for college faculty. Officials explain that salaries form a large proportion of expenses, and there has been a need to catch up since the late 1970s when university

pay slipped badly behind the rate of inflation.

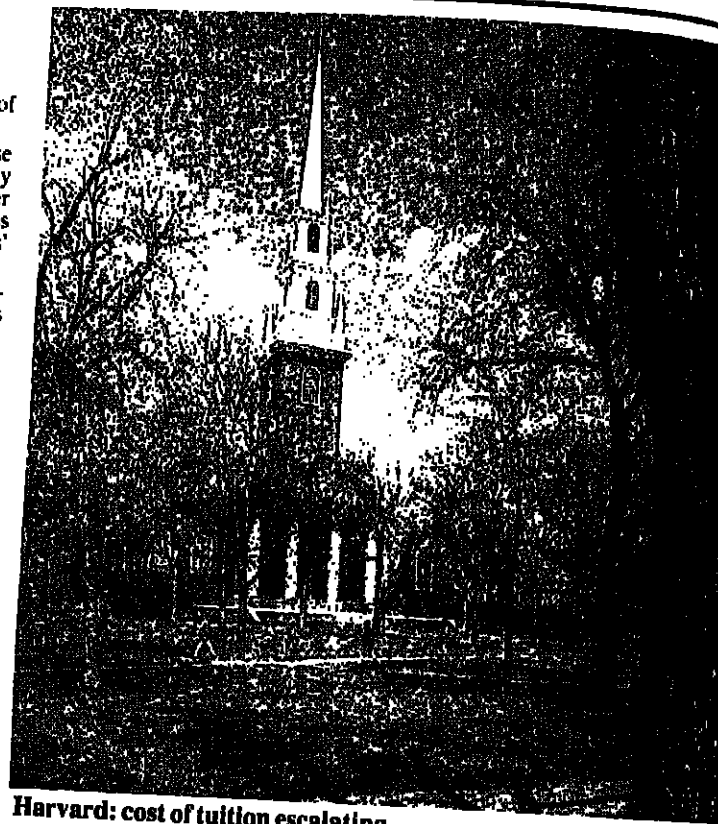
Other excuses given for the rise include the soaring cost of liability insurance, up by as much as \$125 per student, and falling interest rates which affect the return on universities' investments.

There is also the factor of competition. With the number of 18-year-olds declining, many colleges have been spending heavily to make themselves more attractive. New facilities have been built, and new faculty recruited, while institutions watch their competitors closely to avoid pricing themselves out of the market.

One new development, pioneered last year by New York University, is the policy of making freshmen pay a surcharge. New York is boosting its tuition charges by 13.1 per cent for new students, but only 11.3 per cent for sophomores and 9 per cent for those in their third and fourth years.

The University of Chicago, which this year charged undergraduates \$9,600 for tuition, is putting its fees up to \$10,350 for those who return this autumn. New students, however, will have to pay an extra \$1,000 and the extra charge will become a permanent feature of the university's pricing structure.

Chicago's president, Hannah Gray, explains that the aim is to bring the tuition rates into line with those at the comparable institutions. She says: "In the absence of fairness, the higher rate will be applied only to new students. Those currently attending the college



Harvard: cost of tuition escalating

should not be asked to pay more than could reasonably have been expected at the time they first enrolled."

There are signs, too, that some of the increases are being made in order to enable universities to help their poorer students. Trinity College in Hartford, for example, is raising tuition by 10.5 per cent to \$10,355 so that

it can offer nearly \$2 million worth of financial aid next year.

There is some irony in the fact that, although the Reagan administration is determined to cut federal aid to students and hold down the taxes which might force the wealthy to help the poor, the universities may be achieving the same object by other means.

Disinvestment fails to stop campus violence

The decision of University of California regents to sell \$12.3 million worth of their investment in a company doing business in South Africa has done nothing to placate the growing anti-apartheid movement on their campuses.

Last week, in the most violent demonstration seen at Berkeley since the 1960s, 29 people were injured and more than 150 arrested as police came under a hail of bottles, rocks and eggs.

The conflict centred on a symbolic shantytown, built on the Berkeley campus in a bid to persuade the regents to divest the university of the \$2.4 billion invested in companies with South African connections.

Already pulled down once by campus police, the structure had been rebuilt by angry students. When the police moved in again, just before dawn, violence erupted.

When dozens of demonstrators were arrested and placed in buses to be taken to Alameda County's Santa Rita jail, hundreds of protesters surrounded the buses and prevented them from moving. Riot police moved in to clear a path, and the missiles began to fly.

Before order had been restored and the shanties once again torn down, 18 policemen and 11 demonstrators had been injured, and two masked men had been arrested in possession of Molotov cocktails. They were later identified as a teacher and a student, but neither was connected with Berkeley.

The protesters are being charged with resisting a police officer, illegal lodging, trespassing, resisting a university official, violating a court order, rioting and failing to disperse. Bail has been set at \$7,250 each.

Later, about 1,000 people gathered at a peaceful rally to hear calls for a shantytown once more.

Elsewhere in the United States, the anti-apartheid protests have been continuing and shanties are still being built and pulled down, though nowhere have feelings run as high as in California.

One of the largest demonstrations has been at the University of North Carolina, where 11 huts were built outside the administration building to protest the university's \$8.8 million investment in companies that do business in South Africa. There were five arrests as they were demolished.

Shanties have gone up on the campus of Vanderbilt and Syracuse, and burned down at the University of Michigan. At Purdue University in Indiana, which has refused to divest, 22 demonstrators were arrested for trespass.

Yale University officials, however, have decided to allow their students' shantytown to remain for the time being, pending a meeting of the school's governing board. Yale has investments of around \$330 million in companies doing business in South Africa.

The pressure is beginning to have some effect. Columbia University has agreed to complete divestiture of its South African related investments, totalling \$38.1 million, as has the University of San Francisco (\$2.3 million).

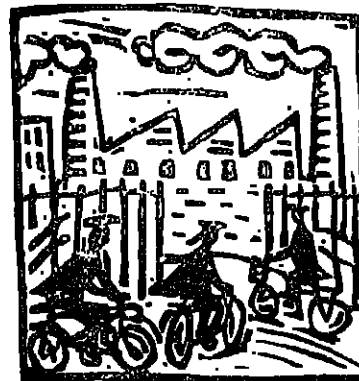
Northwestern University has sold \$3.5 million worth of stock in two offending companies - although it still holds \$100 million worth of investment in 37 others doing business in South Africa.

Bombay University's convocation, he was hooted and booed, while students in other universities in the state threatened violent demonstrations if he turned up.

The issue was clinched when Bombay University's executive council censured him for his role in the affair. The governor was implicated in a previous case in another state in which he sought again to use his gubernatorial office, this time in favour of his own grand-daughter.

GATEWAY TO INDUSTRY III: Finding graduates is big business, says John O'Leary

Shell fishes the pool for the brightest and the best



No one knows the full extent of Shell's involvement in higher education. The links are so many and various that the company is in the process of compiling a computerized database listing them all. And it looks as if the scale of the operation is such that it may make more sense to have two databanks than one.

What is certain is that it is a multi-million pound investment which assumes growing importance each year. As a technologically based multinational corporation, Shell has an almost insatiable demand for highly qualified personnel and also relies more and more on research carried out beyond the confines of its own extensive network of laboratories. The company can only get the best from higher education by knowing the relevant parts of the system intimately and ensuring that the benefits of close association flow two ways.

Shell's links with the universities go back a very long way: its first recorded grant went to Cambridge University in 1912. But the level of involvement has increased by leaps and bounds in recent years, as the universities have become more receptive to collaboration with industry and the company's technological requirements have become ever more complex.

Higher education now receives about £1 million per year in grants and much more in commissioned research contracts. Four people are employed full-time on the recruitment of graduates, with another 20 joining them as the number of interviews reaches its height. And despite all the uncertainty which now bedevils the world oil market, there is no question of this commitment being lessened. It is regarded as essential to keep abreast of competitors.

So is Shell satisfied with its return? There is no answer since the corporation's activities are so diverse, but the most common response is a qualified "yes". And there is a general recognition that the company, as much as higher education, must take the responsibility for making improvements.

Graduate recruitment is a prime example. It is perhaps the most important aspect of Shell's involvement with higher education and the company is far from satisfied with the quality of many of those it is recruiting from universities and polytechnics. But the response is not to blame academics for instilling an anti-industrial outlook in their students; it is to look again at what is on offer and to try to build still closer links with the universities in particular.

Shell claims to attract more applications (8,000 this year) than any other employer in the milk round. For all graduate positions, taking in the Dutch side of the operation, the annual figure touches 20,000. Hardly more than 400 will be offered jobs, but still there is a feeling that the best people are getting away. The problem is that wider opportunities are available today for the engineers and scientists who make up the bulk of Shell's recruitment.

Almost half of the company's intake of graduates are engineers, and the proportion rises to 80 per cent when those who have taken pure or applied science degrees are included. Generalists are recruited on the business and marketing side but, as a rule, Shell likes its executives to have technical experience. A career path, which allows for the possibility of branching out into areas such as marketing or personnel is essential in any case to attract the best engineers and scientists.

Yet it seems that increasing numbers are going that way in the first place, rather than making direct use of their training. Mr Robin Barker, one of Shell's four graduate recruiters, comments that there are now more second interviews are now brought forward to head off competitors. But there is little apparent disaffection within Shell about the attitude of academics, particularly in science

directly. The attractions of the City and its high salaries are proving too much to reject, management consultants and merchant banks snapping up the outstanding candidates.

"I could recruit a whole lot of nuts and bolts engineers without any difficulty," says Mr Barker. "But I am looking for people with breadth of ideas and imagination and they are the very ones who can be tempted into other jobs."

That leaves Shell and other similar companies in a dilemma over salaries. Do they push up starting pay to compete with the City and play havoc with their salary structures, running the risk of demotivating the bulk of their staff? This year a graduate in a non-technical subject will be offered around £8,500, a premium of £500 being added for the most relevant degrees and some flexibility being given to the recruiters to offer a little more to get the best. City starting salaries, meanwhile, are reaching £15,000 in some cases and head hunters are offering £20,000 to people who have not finished their training with other companies after graduation.

Mr Barker and his colleagues keep a close eye on their competitors' salary levels and concentrate on matching them, hoping that the City bubble will burst. Otherwise, all they can do is to ensure that what Shell has to offer is presented to best effect and that those with the greatest potential are contacted at the earliest possible moment.

At the extreme, this means before the student reaches higher education. Shell offers 24 sponsorships a year for students in various engineering disciplines and business studies. They can go to university or polytechnic students, but a stipulation of three B at A level results in most of the successful candidates taking university places. They receive £1,050 each year on top of the grant, together with the opportunity to make more money working during the vacations.



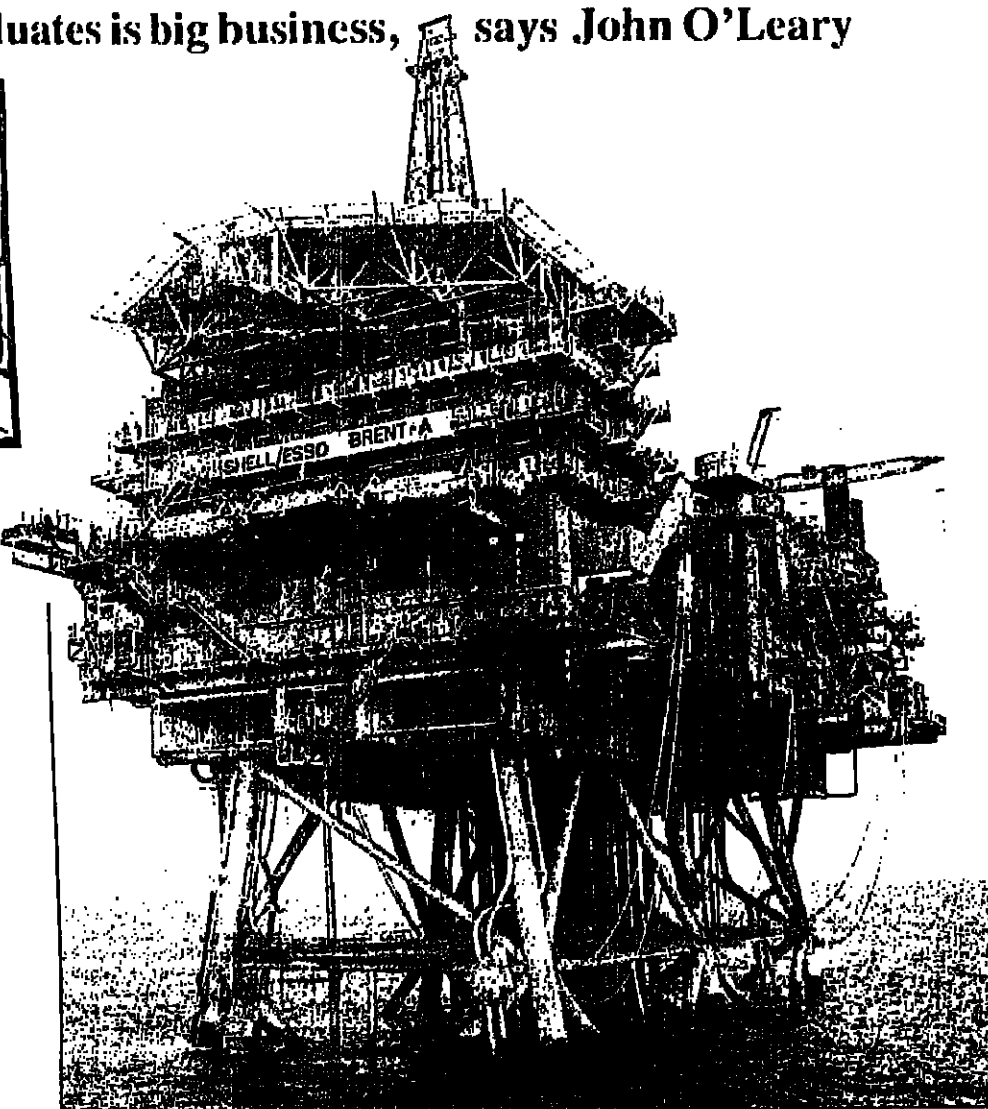
However, there is no obligation on students to take jobs with Shell on graduation, and only about a third do. To some extent this is written off as swings and roundabouts - last year one of the 24 went to work for Unilever and, by sheer coincidence, one of Unilever's sponsored students took a job with Shell. Nonetheless, it is an unsatisfactory return on investment so the company has recommenced its scheme and is trying to involve its sponsored students more fully, encouraging more visits to Shell plants and taking more care over their periods of industrial training.

At the same time, it will be offering more opportunities of vacation work to other students of particular promise. This all means extra effort for those in the laboratories and refineries where the students naturally fall at the very time when staff normally take their holidays. To sell the company well, key personnel have to be on hand. But this is a price that will have to be paid in the increasingly competitive market for the best graduates.

Such measures are partly a response to growing dissatisfaction with the conduct of the "milk round". Some professions - notably accountancy - have taken to interviewing and making the job offers a term in advance of the job offers, a time when the researcher is in no question of Shell withdrawing from the "milk round", some second interviews are now brought forward to head off competitors.

But there is little apparent disaffection within Shell about the attitude of academics, particularly in science and engineering, towards industry. And there is even less feeling that courses should be structured differently to meet the company's needs.

Shell have a pool of 10,000 graduates who can be posted anywhere



and engineering, towards industry. And there is even less feeling that courses should be structured differently to meet the company's needs.

The four courses in petroleum engineering, which have been started in the last few years, are tailored largely to meet the demands of the oil companies. And other graduates required for similar research are given a six-month course in Holland, which will bring them up to the required standard. Mr Barker says: "We are going for intellect and are quite happy to tag on industrial training. If you recruit engineers from Oxford or Cambridge, the goal was to produce single cell protein in competition with ICI, but then the price of oil rose and soya and other natural commodities fell, making the process uneconomic. Rather than disband the research team, other biotechnology projects, on alternative forms of energy, crop science and medicine, were started. Universities with established research records in the relevant fields have been brought in, sometimes to produce enabling technologies to allow the company's own researchers to take over."

Shell has a high academic requirement itself, normally demanding an upper second of its technical undergraduates. Virtually all those recruited from British universities are polytechnics join a pool of 10,000 who can be posted anywhere in the world and are considered to have the potential for high management positions. In the universities at least, no stone is left unturned, 40 being visited in last year's milk round and candidates from others being invited for interviews on company premises. But a high proportion of jobs went to about 10 universities which have high standards in the right subjects.

The same group naturally attract a large share of the research work commissioned by Shell. In exploration and production alone, the company is spending almost £1 million a year on more than 50 university research projects. The work is primarily in geology and engineering, where the research concerned is too speculative or theoretical to be appropriate for the in-house research effort to take on.

Shell actually has 14 main laboratories of its own around the world and employs 7,000 people to do its own research. In 1984, it spent £400 million on research, so its British university effort should be seen in perspective. But much valuable work is contracted out, especially when the project concerned is of a research team which might be left without a role if the work had to be abandoned subsequently.

The relationship with higher education in this context is not without its problems. The first is the lack of direct control, particularly to speed up projects to respond to commercial pressures. And another is sometimes confidentiality, where the researcher wants to publish results, perhaps in a PhD thesis. Fortunately for the company, it is becoming much more common for examiners to accept strictly limited publication.

Projects are generally of long-term

interest and usually run for about two years. At present, for example, Durham University geologists are evaluating the oil-bearing potential of the Solway Basin, using published literature, and at Cambridge University mathematical modelling is being used to trace seismic waves.

However, some research is even more long-term in its possible application. Perhaps the classic example is Shell's biotechnology programme, which is largely a relic of an unsuccessful venture a decade ago. Then, the goal was to produce single cell protein in competition with ICI, but then the price of oil rose and soya and other natural commodities fell, making the process uneconomic. Rather than disband the research team, other biotechnology projects, on alternative forms of energy, crop science and medicine, were started. Universities with established research records in the relevant fields have been brought in, sometimes to produce enabling technologies to allow the company's own researchers to take over."

The main aim, the company says, is not to attract good publicity, although that is always welcome if it comes. The money is written off as "enlightened self-interest" although in higher education particularly, the institutions are becoming keener than the company itself to attach sponsorship labels to any initiatives - the Shell Centre for Mathematical Education, at Nottingham University, is one such example.

One important area of activity for the company is in the sponsorship of overseas students studying in Britain. Shell participates in the Cambridge Commonwealth Trust scheme and in a second initiative for students from Southern Africa, as well as running its own operation placing students for Shell's various subsidiaries around the world. This involves some 350 students, most of whom come from Brunel, Oman and Sarawak, who are counselled on suitable courses, helped with applications and visited on campus. Most are sponsored by the operating company in the country concerned and bonded to work for it on graduation. None of the countries concerned is by any means poor, but the scheme allows them to combat under-achievement among their most promising students.

Of all industry, Shell must rank amongst the most closely involved in higher education. Its business dictates that this should be so and the traditions and age of the company see to it that its links are firmly entrenched. Its senior employees are a natural choice for national bodies looking for an input from industry - Sir Peter Basendell, the former chairman of Shell Transport, for example is a member of the University Grants Committee. But even Shell acknowledges that it is far from achieving the closest relationship possible with higher education; there is little evidence of exchanges of staff in and out of the universities, for instance, and less use made of the polytechnics than one might expect. The National Advisory Body's survey of links in engineering and technology lists six projects at polytechnics, but the company makes no bones about its preference for university links.

Bombay chancellor sacked over exam marks scandal

from A. S. Abraham

The last has not been heard of the exam marks scandal that has rocked Bombay University. The chief minister of Maharashtra state, of which Bombay is the capital, was removed three weeks ago. Now, a second and even more dignified head - the state governor who doubles as chancellor of its universities - has gone.

The surprising thing is not that this has happened, but that it did not

happen earlier. The governor's role in the whole unseemly business was not only major but also only too apparent. Using, or misusing, his considerable powers as head of the university, he sought to pressure the vice-chancellor and the executive council to withdraw the original affidavit the university had filed in the case involving the manipulation of marks in the MD examination in favour of the chief minister's daughter who had failed the examination twice before.

The governor also tried to have the university's lawyer replaced because he felt he had given away too much in the affidavit.

When the scandal was exposed in the press, the governor sought refuge in technicalities, arguing that he could not have questioned the affidavit even if he had wanted to because, once filed, it became the court's property. Outside the governor's residence, however, a different view was taken of his actions, especially by students. At

Bombay University's convocation, he was hooted and booed, while students in other universities in the state threatened violent demonstrations if he turned up.

The issue was clinched when Bombay University's executive council censured him for his role in the affair. The governor was implicated in a previous case in another state in which he sought again to use his gubernatorial office, this time in favour of his own grand-daughter.

Background to the cuts

The NAB, UGC and SED transitory working group was set up in the spring of 1985 with a brief to review the incidence, nature and scale of degree and postgraduate courses in town and country planning in the UK.

It was asked to take particular note of the employment demands for graduate town planners, the structure and length of courses and the recent review of the Royal Town Planning Institute.

The group's review is the first such transitory exercise. Since 1980, there have been two other reviews of full-time and sandwich degree courses in town and country planning. One conducted by the UGC in 1981 and the other by NAB in 1983.

The review took place in a climate of fears that further closures and decimation of town planning education were on their way. Since the 1970s nine planning courses have been closed and intakes to undergraduate courses reduced by 20 per cent. The number of postgraduate students has been halved.

Patricia Santinelli on the tough transitory review of town planning departments

Hard bargain for this year's model

Town planning departments which formed the National Advisory Body's 1983 exercise which resulted in the closure of three public sector undergraduate courses was but the tip of the iceberg, will have felt this month that their anxieties were only too justified.

For the radical rationalization of town planning proposed by the University Grants Committee/NAB and Scottish Education Department transitory group, a fortnight ago, seems on the surface to be even more far-reaching than that proposed for architecture – a discipline where yet more institutional blood is to be spilt if recent speculations that between one to five university departments are likely to close are true.

Basically, the group which was chaired by Dr David Bethel, director of Leicester Polytechnic, has recommended that seven departments town planning courses out of the 25 currently existing – 11 in the public sector and 14 in the universities –

Faulty logic and ill-considered cuts – see opposite page

should be closed, and several others merged to create 12 strong and flexible centres by 1987.

The group has given all institutions involved three months to make their views known. The report is likely to go to the NAB board this week, and will probably be considered by the UGC in May. Advice has to be given to the Secretary of State for Education in time to affect 1987 intakes.

The departments or courses to be closed are at Coventry and Leeds polytechnics, Essex Institute of Higher Education, Nottingham and Reading universities and in Scotland, Edinburgh.

Courses ready to blunt the axe

Coventry One of two institutions whose town planning courses are threatened with closure which has warranted a paragraph in the group's report. This expresses some reluctance at proposing the course for closure, saying that if Coventry could be sustained.

But it adds that this is not the only criterion, and that in terms of geographical spread, the west Midlands would remain over provided if Coventry and Birmingham polytechnic – which meets all the criteria – were to survive.

The course has a double degree structure of the kind the report recommends should form the main type of provision. The BA honours in urban and regional studies has an intake of 35 and the BA honours in town planning, an intake of 25.

Essex, formerly Chelmer, Institute of Higher Education successfully fought for the survival of its town planning course in the last round of closures proposed by the 1983 NAB review. It was reprieved on the grounds of its rural specialism which remains an important factor.

The course in environmental planning started in 1978 and became an honours degree in 1980. It has an intake of 24 set by NAB and fulfils the

criteria of relation to other cognate disciplines, being located in the school of built environment. This is likely to be undermined by the loss of town planning.

Leeds Polytechnic regards the omission from the report of any rationale for closing down its town planning courses as a gross insult and says that it will fight for its survival vigorously.

The BA honours degree was first validated in 1976 by CNA and in the go ahead to continue.

Although the course does roughly meet the criteria of 15 full-time staff, student numbers 117 on the honours degree and 33 on the part-time postgraduate course in town and regional planning, fall slightly short of the required criterion of 150 students.

Nottingham The group's recommendations would close the Institute of Planning Studies which offers a full-time postgraduate course in town planning for around 60 students mainly from overseas. There is also much short-course activity and its provision in both areas.

Reading is the only other institution whose course has been threatened with closure which has been given a paragraph in the report.

The 1983 NAB review itself resulted in the closure of three undergraduate courses at Gloucester College of Art and Technology, was widely criticized because it had used Council of National Academic Awards "ranking" of institutions, and because at one stage or another the majority of institutions appeared on a hit list.

In addition, there was concern about NAB's use of the Institute of Local Government Studies report *Manpower Planning Requirements for Physical Planning* issued in 1982. Later studies disputed its recommendations that output should be reduced and argued on the contrary that there was and is a rising demand for town planners.

At the conclusion of the review, the NAB requested that a further study should be undertaken during 1984 in the light of improved evidence of manpower needs.

The committee agreed that this should not be delayed for more than a year in order that the project review by the RTPI could be completed. The RTPI was asked to include a reappraisal of the INLOGOV report in its study.

NAB's decision to have a further review after 1983, the general decrease in funding of town planning courses and the threat of further planning education review which similarly transitory in nature was agreed by its council in January 1984.

The institute had concluded its last major review of planning education in 1981. This had not been fully implemented and evaluated when it became

necessary to establish another one. The board had been working towards a comprehensive statement on planning for the 1980s, due to start in 1987.

The review was co-ordinated in several stages. The first culminated in an interim transitory working group. This concluded that there was no justification on manpower planning grounds for further cuts in the provision of planning education.

The second stage refined the treatment of manpower issues and focused on wider regional issues, lining an assessment of the future needs of the profession to the existing system and its capacity to meet these needs.

A draft of the RTPI report went to a meeting of the transitory group in November 1985, and a final report was discussed by the group and RTPI in January of this year.



Pointers to the future: Mr Alan Oakley, Surrey's senior assistant planning officer explains the county council's initiatives in country planning to environment secretary Mr Kenneth Baker.

BRIEFING BRIEFING BRIEFING

students to be viable. A large section of the group's report has been devoted to supply and demand as well as to justifying the group's own figures for demand in the light of the RTPI's argument that demand should be set at between 400 to 600. This institute says that even without any cuts there will be a shortage by 1990 and that supply should be increased rather than diminished.

Basically, the group says it is unable to accept the RTPI figures. It argues that the institute's calculations for future demand are based on only one year's actual demand – 422 in 1985 – as produced by the Birmingham studies, rather than on average demand between 1981-1985 which is 253.

The group says that this figure, which has been added 51 for demand for new and emerging activities in town planning, should be accepted as the low projection – or 304. The high projection would be 253 multiplied by the average percentage increase be-

tween 1981-1985 to which has been added 60, giving a figure of 405.

The group also says it was unable to accept the RTPI's contention that only a very small percentage, around 12 per cent, of the 160 or so students on postgraduate courses become available for work, and should therefore be discounted from supply figures.

It does, however, add that because it is not easy to quantify this and because the figure is likely to vary from year to year, it has agreed to make some allowance for it in its recommendations for the scale of future output.

In its discussion on volatility of demand the group admits that the Dickens and group studies go some ways towards updating figures in the INLOGOV report. This was used by NAB as the basis for its 1983 cuts.

In respect of 1981 and 1982 – when demand figures were stated as being 69 and 185 per year – but wrong after that period.

It recommends that a pattern of provision should be established which is capable of expansion, and contraction without the need for the creation, closure or disruption of centres.

The group has also recommended that further transitory review of supply and demand should be undertaken by the NAB/UGC, SED and RTPI in the early 1990s.

Reaching critical mass

London The group favoured setting up one large national centre in London. It decided, however, after looking at provision at the four existing centres, University College, North London, Central London and South Bank polytechnics that these institutions served a much wider student population from the south coast, south Midlands, and East Angles.

It therefore proposed two centres, one at South Bank Polytechnic serving the south. The Inner London Education Authority will decide on the northern centre's location and structure.

Liverpool Liverpool University and polytechnic postgraduate provision can continue provided effective arrangements for the closest transitory collaboration could be made. Neither course meets critical mass criteria; further weakened by close proximity of Manchester University, identified as the major centre for the north-west.

Sheffield Postgraduate provision at both the university and polytechnic, which does not meet critical mass criteria, can continue if the two courses merged or if the institutions share expertise and resources, producing a stronger centre serving Yorkshire and Humberside.

Copies of the report are available from NAB, Metropolis House, 22 Percy Street, London W1P 9PF, £2.50.

Three years 'not enough'

The decision not to reduce the overall length of town planning courses must come as a welcome surprise to many considering the pressure exerted to reduce the degree from four years to three years.

The group says that the nature and range of skills required of the qualified town planner and the emphasis in the courses on applied problem solving makes it essential that they continue to be offered on a four-year full-time basis or its equivalent.

The group felt that any demand for a three-year undergraduate course offering a less vocational and more general education was being met by existing degree courses in environmental and urban studies.

Nevertheless, the group has recommended that there should be a bar after three years when the first degree (to be known as part I) would be awarded. Only those with a first class or 2:1 class honours degree, roughly 80 per cent, would be allowed to go on to the fourth year (or part II) into professional practice.

The group says that there are a number of advantages in adopting a double degree structure. It would enable the provision of town and country planning courses in 1984 – with particular attention to "manpower needs" and "whether a four-year specialist undergraduate degree was the most appropriate method of training for this profession".

In the wake of the 1983 NAB review and in the light of continuing NAB attention to the subject, the situation developed in a number of ways. First, the RTPI set up its own planning education review group to produce a comprehensive policy statement on the structure, purpose and scope of planning education.

The establishment of this group reflected a widespread feeling that the institute needed to respond to the challenge of education cuts rather more positively than it had in 1983, when it had been drawn into giving qualitative advice in "grouping" courses, and in doing so had failed to deal with the substantive issues of the need for planning graduates, planning schools, and the variety of planning educational opportunities then available.

It will also increase the range of choices students have because different centres will develop different specialisms in the part two element related to their strengths.

The publication fortnight of the report of the transitory working group on town planning education produced much unpleasant news, but few surprises. It has long been rumoured that the process of "review" of planning education, which started in the 1970s with cuts in funding for postgraduate students, via National Advisory Body closures to the transitory review, would produce savage reductions in the number of schools – and potentially would lead to changes in course structures, cuts in student numbers, and so on.

In fact, it has been quite clear, since the first round of NAB cuts in 1983, that this transitory review would provide a mechanism for cuts willingly, and as the work of the group has proceeded it has been obvious that they have investigated, in turn, all the avenues and arguments which might be used to justify cuts – and as each issue (whether course length, graduate employment, geographical distribution, and so on) has proved to be a poor basis for cuts, they have "moved the goal posts" and sought other justification for predetermined ends.

Many people will remember the events surrounding the 1983 NAB review of town planning education in the public sector, which resulted in the closure of three undergraduate degree courses, at CLC/CAAT, Liverpool Polytechnic and Trent Polytechnic.

That review caused widespread concern at the way in which the Council for National Academic Awards' subject board had been involved in "ranking".

Moreover, the outcome of the review was generally seen as unsatisfactory, after a total of seven out of the 11 "public sector" schools with undergraduate courses had, at one time or another, appeared on a NAB "hit list".

Perhaps more fundamentally, there was concern that the case for the cuts had rested on arguments about oversupply of graduates which many people found unconvincing, and which anyway raised issues for the profession and education whose solution must necessarily lie beyond the scope of a NAB review.

There was therefore great concern in the planning schools and the Royal Town Planning Institute that NAB then intended to "give further guidance" on the provision of town and country planning courses in 1984 – with particular attention to "manpower needs" and "whether a four-year specialist undergraduate degree was the most appropriate method of training for this profession".

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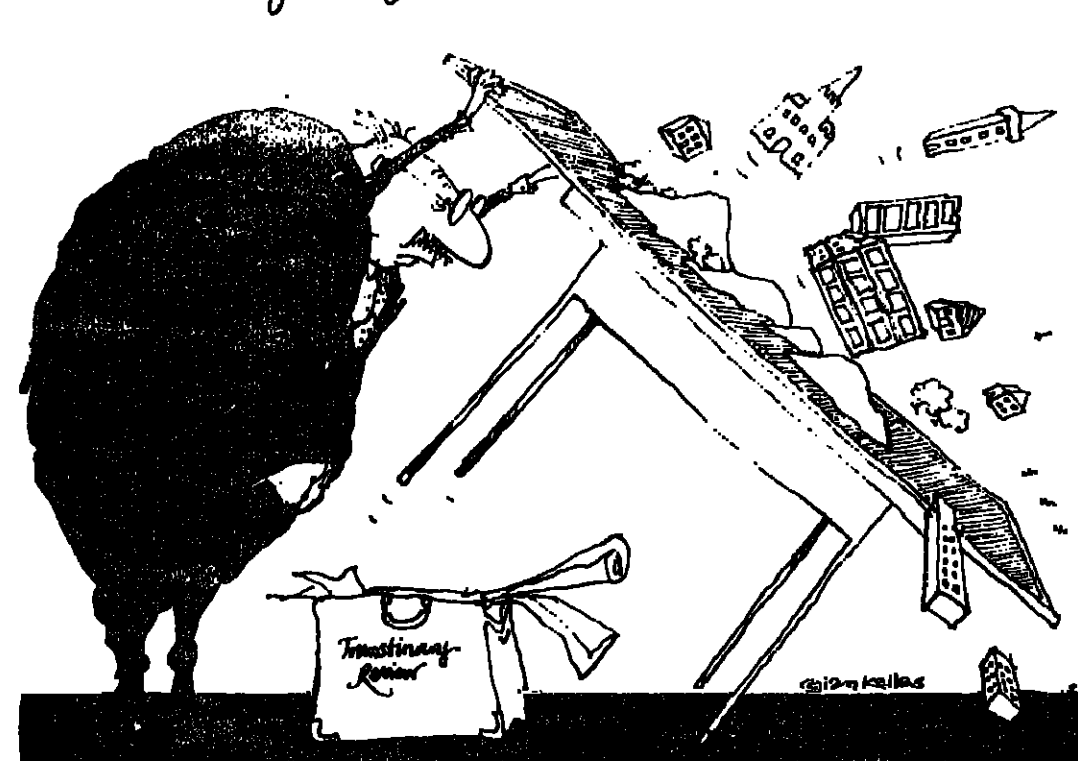
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Examining the foundations...



John Forsyth argues that calls for cuts and closures in town planning schools are based on inconsistent analysis

Blueprint for breakdown

gures for "supply" and "demand" shed increasing doubt on the assumptions which NAB had used in its 1983 exercise. Work by Dickens and Fidler, at Birmingham Polytechnic in monitoring the demand for graduates through the 1980s showed a year on year increase in demand in the "traditional" areas of employment in local authorities, and elsewhere, so it seemed that there was no case on demand arguments to reduce output. Meanwhile, Thomas' work, at Oxford Polytechnic in monitoring graduate output and job destinations reinforced the view that there has not been an oversupply. Town planning graduates have been highly successful in finding employment, compared to most subject areas.

In this context the establishment in the summer of 1985 of a transitory review group, which included a "transborder" element to include the six existing Scottish schools, seemed a

quality of information obtained, and partly because of the tenuous relationship between such simple, generally quantitative information and the complex qualitative judgements which the group made.

The major question of principle with which the group had to deal was how to respond to the report recently produced by the RTPI's own review group. This report, which runs to well over 50 pages of tightly-researched and well-presented argument, states quite categorically that there is "no basis for the claimed levels of over-production which apparently shaped NAB's perception of planning education in their 1983 review", and that "demand is outstripping supply" – there is therefore no case on manpower planning grounds to make cuts in courses or output.

The report also argues that there is no justification for major alterations to the length of existing courses, that their length is necessary to cover the needs of planning practice. On the question of the number and distribution of existing schools and courses the report again left little open to the transitory group by arguing that the current provision has a range of strengths because of the diversity, flexibility and geographical spread which exists.

The two major planks of the transitory group's recommendations are the calculation of supply and demand for graduates, and the concept of "critical mass" for schools. A critical mass is defined by reference to staff numbers – 15 full-time equivalent as a minimum – considered necessary to provide the full range of subjects to be taught, research activity, and so on; and necessarily defines the minimum number of students to be allocated to a number of subjects. By combining the maximum graduate output figures with the results of "critical mass" calculations, the number and size of the "fewer, stronger centres" is defined.

Thus, output numbers and critical mass provide the basis for the dramatic cuts in the number of subjects to be taught, and largely predetermine the geographical consequences of the cuts. Overall, the 25 schools which survive from previous cuts are to be reduced to a total of 12 centres, by closure of 13 schools and merger (or "transitory arrangements") of 10 schools.

Particularly noteworthy in the geographical effects are that there will be only one school in the Midlands; that East Angles, Yorkshire and Humberside will be particularly badly served; and that two schools will be closed in Edinburgh to leave Scottish centres in Glasgow and Dundee. In terms of the distribution of cuts between sectors, the public sector in England bears the brunt (again) so far as student numbers are concerned, with three larger

schools closing – a total of five closures out of the original 13 public sector schools. The change in Scotland is very large in terms of school closures and student numbers. The two English university schools for closure are relatively small, as are the three for merger – but all of them have a status and reputation in the profession, and there must be suspicion that the review was set up purely as a device to incorporate or stifle that opposition.

There are, though, changes which do need to be made to protect and enhance existing provision, and innovations which could be made in planning education, such as widening of access to the profession, the development of education between professions and across subject areas, the development of a wider range of study modes, or the question of course validation. It seems that these issues, and the impact that they will have on planning education, are to be ignored in the pursuit of cuts and rationalization.

Second, will the NAB, University Grants Committee and the Scottish Education Department deliver? The architecture situation suggests that there will be great pressure for implementation of recommendations from the town planning review, but should these bodies respond simply to political pressure, or should they consider recommendations on their merits? Though there obviously should be a presumption in favour of the proposals of a transitory review, that presumption surely places a responsibility on the review group and the funding agencies to be seen to respond sensibly and openly to the arguments presented to them, and if necessary to resist the political pressures which tend to set the agenda and the conclusions.

The distributive effects of the recommendations are outlined above. It will be unfortunate if the NAB, UGC, and SED respond differently to the proposals, thus provoking more confusion, and less feeling and irrationality in provision – but it will be much more unfortunate if they attempt to implement an ill-founded and unworkable system. Transitory arrangements are an almost unknown quantity, but seem likely to cause extreme difficulty in implementation, and could be just one of the points on which the funding agencies sick.

Similarly, the recommendations require the agencies to close departments, impose strict intake numbers on all courses, and to enforce proposals for the structure of courses. Any of these aspects of implementation could – give rise to concern.

Given the clear arguments against the recommendations of the transitory review, we must expect NAB, UGC and SED to consider very carefully whether the closures and other proposals should be implemented. If we then see partial implementation of the recommendations, and a further period of confusion, it will be as a direct result of the approach and purpose of the transitory group. It is to be hoped that the whole report will be reconsidered, in the light of the information and ideas which are available.

The author is secretary of the Education for Planning Association and teaches in the department of town planning, South Bank Polytechnic.

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HEART and soul in sexual healing

Higher Education is male. But above all, it is masculine. It ought to be more female, in the sense of having more women professors, lecturers and administrators, and the main reason for this is that a more female institution is likely to be a more feminine one.

Masculine bias stifles creativity in higher education, Colin Evans suggests

Higher Education could conceivably be run by a certain type of woman and remain a certain type of culture. Men of a certain type could exert greater influence and it would become more feminine.

Prejudice is difficult to avoid. "Masculine woman" invokes images of bearded ladies; "feminine man" sounds effeminate. What helps is the notion of masculine and feminine sides: men are likely to have developed more their masculine side, women their feminine side. But the goal is balanced development of both sides.

The same applies to organizations. The specialized work task determines to a large extent the nature of the balance (one would expect hospitals to be more feminine than armies) but all organizations need both sides if they are to survive and be creative.

The effect of the masculine bias in Higher Education is an over-valuation of the instrumental, the objective, the measurable and the replicable. The humanities are disparaged and they respond to this by trying to adopt the dominant mode; we then have approaches to the literature which treat symbolic texts as if they were complex molecules; we have social human ambivalence and passion.

In the same way, women adopt the dominant masculine mode. They may use power to further women's causes but their mode of interaction and communication is likely to be masculine. They have more in common with men who are happy in this mode than with men or women who are not. The cost of the bias is borne partly by men but mainly by women - especially those who are oppressed by the masculine order. Higher education makes it difficult for feminine men. It makes it all but impossible for feminine women.

"I say this to men: you are going to have to do your share of nurturing and not carry on leaving female colleagues and secretaries to do it."

This statement was made by a woman participant at Grosvenor 86, the Higher Education Action Research Team's workshop on gender-roles in Higher Education. HEART is concerned with creating collaborative ways of making and sharing knowledge and understanding. The standard conference, even if the topic is, say, feminism, replicates the form of masculine exchange. Helene Cixous addressing a silent audience for 90 minutes at a conference may be a blow struck for women but it is also a reinforcement of masculinity.

The HEART workshop attempted alternative forms: small, mixed, leadership "base" groups; plenaries of the whole workshop; simulations and role-plays (Genesis); creative writing; formal arrangements (only women speaking, only men speaking). The effect was to surface an astonishing range of experience - masculine and feminine.

There were sessions which were painful since the theme seemed to have power to release strong personal feelings. But participants learned in ways which are precluded by the masculine, hierarchical mode.

The radical, almost separatist young women students learned that it was possible to speak to and in front of men. Women learned something about the often violent process which turns children into men.

But I can speak best about what I learned about the feminine. First, the humiliations: the student whose computer instructor called her "bird-central administration suggesting coo to her boss with a PS. 'Perhaps, whose wish to write a dissertation on a female painter was ridiculed; women whose male heads of department communicate only by memo; subtle seductions, men playing wives off against young female colleagues or secretaries.



the refusal to treat feminism as a political movement with a place on the syllabus.

A less obvious thing I learned concerned silence. In the large group the women found it hard to speak whereas the men spoke with confidence. A group of women met outside the timetable and got the workshop to agree to split the large plenary in two. In the smaller groups they were able to say how they felt inarticulate and that

this was not just a language ability they lacked but that the kind of articulate foreign language.

Women might learn to speak this language but it was compliance rather than self-expression. The group enacted at one stage the painful silent seminar with older men covertly interrogating in order to elicit some response.

My belief is that men too have had to

learn compliance to language but they did it earlier, in adolescence. Can a purely masculine education be creative and innovative? Will it merely replicate endlessly? Will it foster genuine learning and growth?

The feminine seems to involve a necessary condition of creativity - the ability to wait, to be anxiously striving for resolution. In categories, results, the ability to wait, uncertainty, even chaos, to wait for

The other aspect of the feminist discovery was what I would call the refusal of the heroic. The men's tolerance of anxiety, the stoical bearing of responsibility, hiding and denying weakness, readiness to compromise and fight, the control of feelings by they interfere with analysis.

The women opposed this and spoke of admitting fear and weakness, sharing it with others in a supportive group. These issues are wide-reaching. Until we do something about the masculine line bias we will continue to see schoolgirls abandoning science because it is too masculine and opaque the humanities which they see as more feminine.

It will be hard to refute the accusation that the function of Higher Education as far as young women are concerned is to train them to be understanding of and compliant with masculine ways.

All the available answers seem to be forms of flight or fight; the radical feminist position, taking men on their own power game; the separatist position, avoiding all dealings with men; the denial of difference ('We're all persons'); the placatory masculine position ('I'm not really strong').

An alternative way is shown by the rare and beautiful image of Ardhambisvara, one of the forms of Shiva. A picture of this 11th century Chola bronze illustrated the workshop brochure. The figure is half male, half female, but the integration and balance are so perfect that some people do not even notice. Integration does not come easily to individuals or institutions. It is easier for men and women to project fear and anger on to one another or to deny one's role than to face it. This is what we should be aiming for.

Colin Evans is Senior Lecturer in French at University College, Cardiff and Convenor of the Higher Education Action Research Team (HEART).

Brian Harrison on the final volume of Oxford University history Footlights for the dons

volume eight the atmosphere could hardly have been more helpful or constructive. The seminars lasted for about an hour and three-quarters; one, two or three or on one occasion four, were tape-recorded with permission.

The mood was by no means one of cosy self-congratulation: there was concern about funding, the small proportion of women in university posts, and the overloading of the tutorial system, and history frequently suffered before discussion on current policy. Practical during a memorable exchange between the Lords Bullock and Franks on the university's political anomalies that it was with the greater to draw upon when discussing their world. Lord Franks quietly announced himself "unrepentant" implemented) for co-ordinating the opinion of colleges with majority voting. "This university," he said, "is now a federal institution, and the voice of the states ought to be heard."

Several speakers thought mixed colleges would have arrived in Oxford in a more orderly way that council had been set up, and speakers acknowledged Oxford's continuing need for de-division. Yet Oxford's decentralization was praised more than once for helping to contain unrest in the late 1960s and early 1970s; it and distant authority to attack. Furthermore, Lord Bullock stressed how readily Oxford had 1945: among other things, it coped with a large students, founded new colleges, and greatly expanded its medical school. One retired tutor in war, said he had witnessed "an absolute upheaval" in the type of student admitted, and a succession to the family firm made him indifferent

to the class of his degree.

Another Franks commission recommendation - fewer tutorials, more college classes and better-organized university lectures - was endorsed not only by Franks himself 20 years on, but also by several other speakers. Some scientists blunted impact on the tutor, when repetition resulted from its alleged need to "cover the causes the Oxford tutor to substantial expertise about his pupil; fields of teaching are contracting, and pupils are increasingly being sent to specialists in other colleges.

"I never thought tutorials were a system," Lord Bullock reflected, looking back rather wistfully on older practices. "I always thought they were a

The seminar promoted valuable exchanges between tutors in different subjects. Sir Kenneth Dover explained how during his lifetime "the whole business of composition has been removed from the centre to the periphery" in classics occupying the space thus vacated. And in the first Richards explained the work of the Enzyme Group so lucidly that its activities seemed at least temporarily within the historian's grasp.

Here the university showed itself adept at co-ordination, with Science Research Council funding as the bait. But the Enzyme Group Oxford is able to retain a large concentration of flows from its decentralized power structure, so and in Oxford's philosophical breakthroughs were the late 1940s, informal discussion groups were required to bridge the fragmented collegiate

structure.

The seminar's session on libraries made it clear that behind all these tutorial and research developments lies a vast growth in Oxford's library resources. It was perhaps symbolic that

this was the one seminar of the eight that was overloaded with material; as the seminar progressed, one felt almost physically submerged in a catacomb of manuscripts and books (one-and-a-half miles of books added to the Bodleian Library in academic year 1983-84 alone). Furthermore, the cataract debouches into the middle of the city, because (unlike Cambridge) Oxford in the 1930s did not build its main library on the periphery.

The university's ability to draw upon its ever-widening range of talent since 1945 became particularly clear in the sessions on religion and women. Broadened recruitment increased the number of Roman Catholic students, for example, and the age-old suspicion between Oxford and Catholicism seem at last to be coming to an end - Catholics making major contributions since 1945 to Oxford's scholarship in philosophy, theology and history.

The advent of mixed colleges from 1974 increased the proportion of women in Oxford, but women's slower progress in gaining permanent academic posts in Oxford helps to explain why (unusually among Oxford seminars) this one was better attended at its last session, on women, than at any other; here the discussion focused less on the past, more on what should happen in the future, and the speakers - Dr Anne Whitman and Baroness Warnock - were heard with rapt attention.

As a splendid illustration of how the family atmosphere of college life could still produce notable achievement, the playwright Alan Bennett told us - with disarming modesty and brilliantly-turned phrasing - how his contribution to *Beyond the Fringe* had emerged from the warmth and informality of the Exeter College smoking concerts of the late 1950s.

His talk is alas inadequately recorded because a member of the audience, rocking her chair back at one of the more hilarious moments, knocked the author's microphone off his pedestal, but those who heard it will not forget his account of how the university had then seemed, even in its daily routine, to inculturate an unconscious taste for theatre - though the nightly advent of the dons into hall for dinner, for instance.

For the young Bennett, the university was "a theatre in which the undergraduates were the audience and the actors were the dons".

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One of the most important episodes in the social history of the Second World War in Britain was the evacuation of inner city working class children to rural reception areas in the first months. Evacuation of the "priority classes" in the population as far back as the 1920s; preparations were speeded up in the late 1930s, and during the Munich crisis of September 1938 some rehearsal even occurred. However, when the first real wave of evacuation took place on and after September 1, 1939, it was conducted in an atmosphere of haste and confusion. Over the course of several days there trooped out to the countryside a pathetic exodus of roughly 827,000 unaccompanied schoolchildren, 524,000 mothers with pre-school children, 13,000 expectant mothers and 173,000 others (principally the elderly, blind and disabled).

Evacuees were dispersed over a wide area: London children, for example, were spread from Land's End to the Wash, under 476 billeting authorities and 73 local education authorities. They frequently began their journey early in the morning, clutching gas-mask and suitcase, at a railway station thronged with milling crowds of forlorn and confused fellow evacuees. Exact destinations were kept secret, and railway journeys would often be slow - with the result that many of the children, already traumatized by separation from their families, arrived at reception areas tired, frightened and lonely.

Arrangements frequently went wrong: a sleepy Dorset village, expecting a few dozen docile grammar school girls, could find itself, at ten o'clock in the evening, invaded by a hundred restless East End mothers with exhausted and fretful babies. The distribution of billets was often chaotic, with the result that on arrival many evacuees found themselves in a scene "reminiscent of a cross between an early Roman slave market and a Selfridge's bargain basement", as one contemporary observer put it; hosts might select children according to their good looks, farmers were seen to snap up the strongest-looking boys and set them to work on the land, and there were many accusations that the big houses of the rural gentry remained suspiciously empty of city urchins.

Many of the generation of British adults presently in their 50s can look back on evacuation as the most important event in their childhood. Of the enormous social disruption of the war-time in the late 1930s, on one estimate, less than half the population left home even for a single night in the year; yet over the course of the war there were 60 million changes of address in a civilian population of 38 million. But for the children it had a special significance: at a stroke, families were disrupted, and they found themselves, at an appallingly early age, having to deal with a strange and often hostile environment.

Evacuation has also been identified by many historians as an enormously important causal factor in the creation of that wartime reformist consensus that swept Labour to office in 1945 and produced the mandate for the welfare state legislation of the late 1940s. According to many accounts, middle class complacency was severely shocked by the condition of many of the evacuees. Newcastle, for example, 31,000 children registering for evacuation, 13 per cent were deficient in footwear and 21 per cent in clothing; in Scotland, 39 per cent of evacuees turned up in clothes that were "bad or deplorable". A large proportion of the children were said to be suffering from head-lice, scabies, impetigo and general uncleanliness.

Some, it was alleged, possessed an alarming ignorance of the joys of country life, being surprised that apples grew on trees and not in wooden boxes. A few were said to display a lack of toilet training that extended way beyond mere bed-wetting and to unimaginable depths of depravity: "You dirty thing, messing up the lady's carpet. Go and do it in the corner," said one Glasgow mother to her child, several historians - has passed into the folklore of the Home Front.

The thesis that evacuation changed middle class attitudes was most cogently presented by the late Professor Richard Titmuss in his brilliant study of the social services in wartime, *Problems of Social Policy* (1950). Titmuss argued that the revelations of the children's condition "aroused the conscience of the nation", leading to a much wider debate on the condition of the people; then the Dunkirk experi-



"Many children, already traumatized by separation, arrived at reception areas tired, frightened and lonely..."

Going to the country John Macnicol re-evaluates wartime evacuation

ence of July 1940, with the threat of invasion, led to a "rearrangement of values" among the governing class such that henceforth they accepted the need for universal social services as reflecting this "pooling of national resources and sharing of risks".

The social debate and revolution in attitude engendered by evacuation thus produced a succession of welfare reforms, from the expansion of school milk and meals provision to the 1944 Education Act.

It was implicit in much of the contemporary comment at the time that the initial evacuation scheme failed largely because of the incoherent behaviour of a minority of "problem children". Yet in retrospect it can be seen that its failure was largely the result of poor civil defence planning. In the 1930s, civil defence drills were seriously inhibited in the pacifist atmosphere of the early 1930s and a profound pessimism over the likely scale of bombing casualties. On the basis that "the bomber will always get through", and looking to the highly untypical example of the Spanish civil war, planners in the Air Ministry and Ministry of Health took the gloomy view that immediately war was declared the Luftwaffe would launch an all-out attack on British cities; there would be devastation of buildings, epidemics, disruption of food supplies and widespread panic.

In the circumstances, it would be impossible to implement fine details, such as ensuring that evacuees and hosts were well suited; simply to get the children out of the cities would be a major achievement. As a result, many important arrangements (for example, the co-ordination of railway timetables, or medical inspection of departing children) were left unplanned. There is no doubt that the scheme's failure was also a tribute to the aloofness of many senior civil servants from the realities of working class life. Margaret Cole's verdict that the scheme had been drawn up by minds that were "military" by many of the teachers, who accompanied the children, was shared by the child evacuees themselves. "The children who told the Commons: 'The children who have gone to the country are much taller, stronger and better fed, they sleep longer and in every way they are alert and more easy to teach... Among the children of a Woolwich school evacuated to somewhere in Kent the average weight of the boys has increased during the last month by 22lb, and of girls by 34lb."

However, finding statistically valid evidence of this was fraught with problems, as the Board of Education soon began to discover. Obtaining a representative sample of evacuees in early 1940 was well-nigh impossible: were those children who remained in the conditions under which they were living but simply to the headless billets an untypical minority who had enjoyed the evacuation experience and who liked country life, who had kindly hosts, who did not suffer homesickness, or who were being exceptionally well fed by their hosts? Such surveys as the board did manage to conduct in 1940 produced disappointingly inconclusive results. Most puzzling were the regular anthropometric surveys of children evacuated to camp schools. To the utter despair of officials, such children actually experienced retarded growth rates; Sir Edward Howarth, director of the National Camps Corporation, concluded from this that "it is better for a child to stay in East London sleeping irregular hours in ill-ventilated shelters and eating fish and chips than to have fresh air and conditions in one of our camps with regular hours in whole of sleep and plenty of well prepared wholesome food". Thus did ordinary children confound the experts; clearly, they preferred the inner city environment and family life in which they had been born and reared.

Yet within Whitehall there was reluctance to accept the implications of such evidence; far from there being a "rearrangement of values", as Titmuss believed, officials tended to cling to entrenched attitudes, particularly when facing the charge that the revelations of the children's condition had demonstrated the woeful inadequacies of the school medical service. Sir Arthur MacNicol, chief medical officer to the Board, while acknowledging the "unexpectedly high incidence of pediculosis and bad habits among schoolchildren" that had been revealed, concluded that "the root cause of these conditions lies in the home", and Sir Maurice Holmes, permanent secretary at the board, agreed that the school medical service was not to blame.

Nor do we find much evidence in the Public Record Office to support Titmuss's notion that the expansion of free or subsidized milk to schoolchildren - from 57.6 per cent in February 1941 to 76.3 per cent in February 1944 - was a tangible instance of the Dunkirk spirit permeating Whitehall. In fact, expansion was being planned prior to the war anyway and just about the time of Dunkirk - but quite unconnected with it - the Ministry of Food decided that children must be one of the vulnerable groups in the population whose nutritional intake would have to be protected as part of a

national food policy for an island race threatened by the submarine; accordingly, milk supplies were redirected to schools. Again, wartime milk consumption by children increased for the simple reason that, with so much social disruption, it was virtually impossible to operate the pre-war means tests to decide eligibility; it was easiest to make the service universal.

The evacuation experience does not appear to have dramatically changed attitudes within Whitehall, therefore. And to many conservative social observers in society at large - particularly those in voluntary organizations like the Women's Voluntary Service who had helped with the reception arrangements and had fairly fixed notions of social propriety - it merely confirmed their view that the root cause of the children's condition was family failure, poor parenting and general social inadequacy. Thus the Women's Group on Public Welfare, in *Our Towns, a Close-Up* (1943), maintained that "the effect of evacuation was to flood the dark places with light and bring home to the national consciousness that the 'submerged tenth' described by Charles Booth still exists in our towns like a hidden sore, poor, dirty and crude in its habits, an intolerable and degrading burden to decent people forced by poverty to neighbour with it".

What was required was educational reform that would "express the schools to the pressures of middle class standards and requirements", with an emphasis on "training for future wives". Much the same interpretation was shared by most speakers in a House of Lords debate on May 5, 1943: Lord Geddes maintained that evacuee mothers "were quite obviously without any effective social traditions", being "cultural orphans" with children who were "like untrained puppies or untrained kittens; they messed in the corner of any room". Likewise Lord (Cosmo) Lang, newly retired Archbishop of Canterbury, said that "many of the children came from homes where the houses were decent, where the wages were good, and where, apparently, the state of the children was not due to any real defect in the conditions under which they were living but simply to the heedless and the thoughtlessness, the carelessness and the ignorance of the mothers".

They viewed the experience through very different eyes. B. S. Johnson's collection of memoirs *The Evacuees* and the Oxford, Cambridge and Scottish surveys conducted at the time show how essentially neutral and adaptive were the responses that so horrified Women's Institute moralizers - from one woman's uneasy comment "there's too much grass about" to the London boy who was aghast that milk should come from a dirty cow rather than a glass bottle. Most fell in love, and found rural mores stuffy and restricting compared with the warmth and community of street life. The most common reason for drift-back to the danger areas was homesickness; revealingly, only a derisory 3 per cent of East End evacuees surveyed by the Barnett House Study Group said they would like to remain living in London after the war. Evacuation, in short, revealed the essential solidarity of working class family life.

Thus the small minority of evacuee children who, for understandable reasons, displayed the material, medical or behavioural symptoms of the poverty and social deprivation that was all-too-common in the 1930s did in a sense provide a shock to the public consciousness. But the extent of such cases was highly exaggerated, and their causation was frequently located in the simple and convenient explanation of parental inadequacy - an explanation that was the product of social conflicts and class antagonisms. Contrary to what Titmuss argued, the social debate on evacuation probably served to reinforce the diversity of analyses of the causes of poverty; welfare state was needed; among conservatives, that the bulk of social problems were caused by an incorrigible underclass of personally inadequate "cultural orphans" for whom a welfare state could do little. The evacuation episode thus shows us that the reformist consensus of wartime, so stressed by Titmuss and some historians, was something of a myth.

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Ernest Boyer

Teaching more of the people for some of the time . . .

The vice president at one of America's largest public universities said recently that he is disturbed by the image of his institution as a college for part-time students. "For me that conjures up someone coming to campus, using the services and then leaving."

Disturbing or not, this is what many students do. At a public university in the western United States most of the 40,000 students commute and many are part-time. The huge campus is amazingly quiet after 5 pm; the students' union building acts as a magnet for dormitory students in the evening, but few off-campus students return for after-class events. The institution is like a city - thronged by day but deserted at night.

Part-timers are, in fact, the fastest growing group of students in the US. Many are older people, returning to school to enrich their lives or update skills and, for these students, the traditional four-year college programme often takes from five to seven years. At the University of Washington, for example, only 39 per cent of the students complete the baccalaureate programme in four years.

The proportion of students attending college part-time has increased steadily from 32 per cent in 1970 to 40 per cent in 1980. Various projections raise the percentage of part-time students to 50 per cent by the year 2000. Even now, 63 per cent of the nation's two-year college students attend part-time, as do nearly 25 per cent of undergraduates in four-year colleges and universities.

Today, most colleges and universities are divided into two cultures: resident students and commuters. Commuter students are in the shadow of the campus. Recreational and cultural activities are usually scheduled to serve residential students. Offices that provide services such as student aid are not open at a convenient time for commuters. At a mammoth urban university in New England, commuting students sometimes spend an hour or more just trying to find a place to park.

A gulf between the two worlds is the difference between campus as home and campus as a stop on the bus line or a search for parking place. An observer at one college in the Carnegie study of undergraduate education said: "Even more than race or class divisions, the commuter-resident distinction is the great dividing line in higher education."

One campus recently visited by our researchers is divided between a growing majority of students over 30 who have families and jobs and the traditional younger student who lives in halls of residence on campus. Activities that bring together these two groups simply do not exist. The situation troubles the student leaders: "We've got to get rid of the divided image we have." No solutions were forthcoming, however, and many people now seem willing to accept a divided student body as a fact of life. Part-time students also feel the brunt of condescending attitudes in the classroom. One professor who interviewed reflected the feeling of many too excited about the classes I have with these people. I'm much more committed to the younger, full-time students who are just beginning their careers."

Our national survey presented a revealing profile of the part-time student. Most part-timers are over 25, married, employed, and many are also first-generation students from working-class backgrounds who are coming back to college after having dropped out several years before.

We also found in our study that most

part-time students wish to be full-time. Their decision to attend part-time is forced on them by family obligations or financial constraints.

In spite of the prejudice they encounter, part-time students are usually deeply serious about their education. They are more supportive of general education than full-time students and they are also less inclined to focus strictly on the job potential of a college education.

At the same time, we found disturbing dissatisfaction among part-timers. They seem to sense that faculty and administrators tend to view them not as the real students. As a result, they feel second-class: welcomed for their tuition, but offered a lukewarm reception in terms of service and attention.

We also found that part-time students are less satisfied with their total college experience than their full-time counterparts and they have a weaker commitment to the college as community. Further, many are often unhappy about their relations with professors and report having no teachers who take a personal interest in their progress.

At one of the colleges we visited, the commuter students banded together several years ago to address what they considered discrimination by the resident students. They formed a club, thereby gaining access to the student government association. They also found a meeting place in the basement of the science building, and brought their own governance to the college community.

Student leaders at another college recently have puzzled over ways to get commuters and non-traditional students more involved in campus life. "Most of the off-campus group couldn't care less about campus life," we were told. But we saw no evidence that efforts to reach them had been made. And there wasn't even a convenient place for part-time students to assemble between classes.

Faced with a growing number of the so-called non-traditional students some institutions have begun to offer special services. To inform commuting students about campus activities, a number of colleges and universities now mail important college announcements to the students' homes. Others run a special column for commuters in the student newspaper, while some issue special newsletters for them. Among examples of other special activities:

- American University in Washington, DC, has provided commuters with extra study space during exam periods.
- San Diego State University offers a multitude of services for part-time students - ranging from bike lockers and bike lanes to distressed motorist services, escort service and single-student groups.
- The State University of New York has a college geared especially to older part-time students - Empire State College - in which students study independently under the guidance of a mentor.

Colleges and universities, if they are to sustain a vital centre of intellectual inquiry and social cohesion, must provide time for conversation and reflection. It is in this context that America's college leaders now confront an urgent question: How can the academy serve the growing number of part-time students while also supporting a community of learning on the campus?

The answer to that question is not only important to the millions of non-traditional students returning to higher education. It is also important to the nation's colleges and universities that once again are being asked to find the balance between the value of tradition and the imperative of change.

It is not altogether inappropriate for a sociologist of religion to begin with a Bible text: Thou shalt not oppress a stranger: for ye know the heart (variant reading = soul) of a stranger, seeing ye were strangers in the land of Egypt (Exodus 23:9).

Many people come to their jobs through necessity, the channels marked out in their environment, but that can hardly be true of many sociologists. The academic life is a vocation, and those who pursue it do so largely from choice and inner necessity, rather than from external constraint. I came to be a sociologist, I fear, because I know the "soul of a stranger".

Even after nearly nine years in Northern Ireland I am - perhaps not unexpectedly - a stranger in Ulster. Academics may engage in the community in which they work, assimilating themselves to its values and style of life, but the odds are against it unless born or raised there. The university world has hitherto been a fairly mobile one, with usually a more cosmopolitan ethos than the society around it. Even in Northern Ireland that remains moderately true. I was a south London boy from a working class family (sociologists should always establish street credibility early). But even then I fear I was a stranger. A bricklayer's son in a grammar school is not best placed to feel at home, even at home. At school, he lacks the manners and comportment to be entirely comfortable, and at home he soon displays interests and information which place him outside the range of routine activities and conversation, at the edge of the community.

Anyway, I started at a (dis)advantage being born to the name of Wallis. The Penguin Dictionary of Surnames offers for Wallace/Wallis, "kelt, Welshman, Breton, foreigner". The derivation seems to refer to an alien in the midst, or to one who has long travelled abroad and returned to his homeland. To be called Wallis is, therefore, I suppose, by definition to be a stranger, an outsider. The advantage for me, occupationally, if not personally, was that I never understood the world I lived in. In this respect I clearly differ from some of those who pursue the vocation of sociology, as much as from their fictional derivatives in such works as *The History Man*. For them, the world is all too transparent; for me it never was.

It was never clear to me why we were poor and others so very comfortable, why, in a world being opened up to me by a voracious appetite for the printed word, justice seemed so partial. I never entirely understood why I lacked social grace when others seemed so very much at ease, nor even why I had been singled out to be small, angular and short-lived, when youthful Greek gods, like athletic, blond and possessed of 20/20 vision abounded on the cricket team or as escorts of the girls I most adored.

Physically I was designed to be a swot, but temperamentally I was disinclined. I covered my embarrassment with humour, fooled around a lot at school, and left not unwillingly at 16 when the father I had neglected to get to know in my adolescent preoccupation with self and society, died too soon for remedy.

I was an abrasive teenager and early adult, lacking social skills but convinced I was as good as anyone else. I attacked rather than embraced the values of my middle class friends. As an affliated of the comfortable, without the generosity of spirit which able and intelligent people of the world, its follies and compromises, might have endowed me, I was not easily to be borne by any but the more long-suffering of their parents. Books through Holden Caulfield, *The Outsider*, Camus, Genet, and Laing's romantic psychiatry, I acquired a sense that being an alien on the face of the earth, a stranger in the land of Egypt, was at least an honourable, if not a convenient tradition in which to have a modest place.

Aspiring to be a writer inevitably wrote the great American novel, or to Cap d'Aulibes and write the epic poem of the modern age. Words; it

Roy Wallis retraces the path that led him from London and his youthful literary aspirations, via Colchester and the swinging '60s, to sociology and Northern Ireland

The soul of a stranger

seems were the only available avenue. And I did go off, with that unutterable naïveté of the young which sends them chasing blither and yon without adequate command of any language, even their own, and without even the good sense to save enough money beforehand. Consumed abroad by greater isolation and loneliness than even at home, I soon returned, sufficiently chastened only to put a little more by for next time from my jobs as barman, pump attendant or roofer's mate. It wasn't until I went to university that I fully appreciated that the great American novel probably had to be written by an American, and the epic poem was not designed for less than epic age.

I was 21 by the time I got to university. For five years I had fooled around, trying this and that for employment during that easy time in the early and mid-1960s when everything seemed possible and jobs were not hard to come by. Long summers could be spent working evenings in a bar, or nights in a garage, leaving long summer days to sit reading in the park, or to enjoy heady conversation in a coffee bar with the available

In a world of foreigners perhaps one who travelled far and wide and came home could find a role

lumpen intelligentsia. Books read, music heard, movies seen, ideas half understood, politics partly practised. We were the rag end of Bohemia, infinitely saddened to have been born too late to be Beatniks, and in the wrong place to be Dharma Bums.

University came at the second attempt. At Essex, heartland of the new liberalism in higher education, and worse, I was as happy as I could the literary nonsense soon got knocked out of me in a course on the 18th-century novel and poem. Not only was I not the stuff good novelists and poets are made of, I was not, it seemed, even the stuff of which good students of literature are composed.

Left with a choice of politics and sociology, I readily settled on the latter. Power was not something I sought, and the study of its operation seemed too constricting. I wanted the big picture, *All and Everything* that Gurdjieff had offered in an impenetrable and interminable book once I wanted an account of the human condition, nothing less would do. Above all, I suppose, I wanted an insight into the existential state that left me - even in a society as congenial as the University of Essex - at odds with circumstance.

In sociology I glimpsed occasional need. Not to be sure, in the arid categories of Talcott Parsons' structural functionalism, nor yet in the talmudic intricacy of later marxist apologetics, but here and there in the works of those who moved observantly and sympathetically in a world of real people rather than pattern variables or the dialectic in

history. Not that I am hostile to the Alasdair MacIntyre was an inspiration: here was thought to some obvious purpose. Careful, logical argument could unseat the thrust of what being human entailed. But what gripped my imagination was the world is full of strangers; jelling one another on the street, or in the mass media, all too often mutually incomprehensible, sometimes violently antagonistic. In the alienation of such a world I could feel at home. Perhaps, having been myself a stranger in the land of Egypt, I even had something to offer them in return for what they showed me. From the boundaries and borders of these worlds perhaps I could reach across, touch some on either side, bring knowledge of their vitality, validity and worth from one to the other, and through knowledge, perhaps even toleration.

In a world of foreigners, perhaps one who travelled far and wide and came home could find a role. Consulting one *intellectual thought*, one way of life into another. The war carried might often be viewed with suspicion. Having absorbed foreign ways, he might suspect the state or the morals of the young, and those among whom he travelled must often suspect the sincerity or good sense of someone who displayed empathy and fellow feeling, yet failed to succumb to commitment to a way of life for which he professed such respect. But one cannot have everything; if it would not lead to the gratitude and respect of one's nation, it at least promised the possibility of making a living from what one was. I became a sociologist because I am, by nature, an outsider.

For me, the world is strange, a problem; not only the world of alien culture and style of life, but the world in which I pay my mortgage and raise my family. And sociology is not only about translating the manners and mores of alien life and sub-cultures into the language and sensibility of the rest. It is about making strange and problematic what we think we already know, questioning the assumptions long held in our community deriving their strength from prejudice and tradition rather than open-minded observation.

And making the strange, the foreign obvious, enabling us to see how reasonable people starting from the point they do, could come to live and think this way; and making what has hitherto seemed obvious in our own society problematic, to question how and why it is done, providing the opportunity for reappraisal or greater understanding of our own behaviour, seem to me a socially and morally worthwhile purpose, justifying the sociologists' continued abiding inside universities and out. And once inside universities and out, I may yet come upon the answer to the question of why I am a stranger in the land of Egypt, but somehow I doubt it.

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by David Carlton

The Audit of War: the illusion and reality of Britain as a great nation by Correlli Barnett Macmillan, £14.95 ISBN 0 333 35376 5

Correlli Barnett begins his otherwise controversial and opinionated book with some incontrovertible facts about the Great Britain of the mid-1980s. Four decades after V-E Day his country has been diminished to 14th place in the non-communist world in terms of gross national product per head; she has little more than a third of West Germany's manufacturing output per head and half that of the United States; and she has unemployment standing at over 13 per cent, a rate one third higher than in West Germany and four times higher than in Japan. He adds the judgement that "the wasting asset of North Sea oil alone stands between her and economic catastrophe". But if he has any miracle cure in view he does not see fit to present it. His purpose instead is one possibly more appropriate for a professional historian: to attempt to identify those primarily responsible for our present miseries.

In *The Audit of War* he focuses on the later stages of the Second World War and appears to consider the domestic policies of the Coalition Government as the *fons et origo* of almost all that has since occurred. His thesis is that the War Cabinet was hijacked by a misguided crowd of advisers, led by William Beveridge, who thought that the British people deserved a future based on a comprehensive welfare system, full employment and no slums. One courageous figure tried to stem this tide of alleged folly by arguing that the country's resources should not permit the building of any such "New Jerusalem" at least until the British industrial base had been sufficiently modernized to allow the country to hold its own in a postwar world where a ruthless competition for markets was bound to ensue. Mr Barnett is unlikely hero is Chancellor of the Exchequer Kingsley Wood, whose early death in September 1943 broke all remaining resistance to supposed national irresponsibility.

The problem for Wood was that even many Conservatives rejected his analysis. Lord Halifax, for example, had written in July 1940: "We are all conscious as the talk proceeded of the contrast between the readiness of the Nation, and particularly the Treasury, to spend £20,000,000 a day in war to protect a certain way of life and the unwillingness of the administrative authorities in peace to put up, shall we say, £10,000,000 to assist in the reconstruction of Durham unless they could see the project earning a reasonable percentage. The fallacy in this line of argument lay of course in the fact that the British

Nation could not for long go on spending £20,000,000 a day either on the war or on social programmes. For by the end of 1940 the country was in effect bankrupt and spent the rest of the war on an American life-support machine. It was thus an absurdity to suppose that huge wartime state expenditure could simply be turned over to the building of a New Jerusalem in the immediate postwar years. But even those Conservatives (and socialists) who saw this did not have the courage to follow Wood's lead in bringing the truth home to the deluded British people. For, as R. A. Butler never tired of stating, politics is the art of the possible. And the electorate, particularly in by-elections, were clearly signalling their determination to listen only to the siren voices of the high-minded opponents of financial rectitude.

Mr Barnett's thesis has much superficial plausibility. And it is bolstered by his admirable use of official documents to underscore the pitifully weak condition of the British economy in general and of such vital industries as coal, steel and shipbuilding (each of which is the subject of a devastating chapter). He stresses also that the Education Act of 1944 was fatally flawed by the absence of adequate provision for vocational training - which could not be afforded because too much was already committed to implementing Beveridge's dreams. The inevitable result forty years on, according to Barnett, is:

Of the broad mass of school-leavers at age sixteen, fewer than five out of ten British youngsters would be leaving with a piece of paper that an employer would regard as having any worth, as against nine out of ten German youngsters. Whereas in France and Germany 80-90 per cent of school-leavers and in Japan no fewer than 94 per cent would enjoy systematic job preparation or further education before entering the labour market, only 30 per cent of British school-leavers were to be so fortunate; the remaining 70 per cent being only equipped to be coolies, like their fathers and grandfathers, but in a technological world that had little need of coolies.

Two broad, though perhaps incompatible, challenges can be directed against the attribution of so heavy and almost exclusive a responsibility for our present woes to the members of the Churchill Coalition. First, it is necessary to recall that it is not Mr Barnett's deteriorating position in his country's history that is the subject of the book. In 1972 he published *The Collapse of British Power*. In that important book, however, Kingsley Wood was a villain rather than a hero. Allegedly possessing a non-conformist conscience (invariably repugnant to Mr Barnett), he was excoriated as a strong supporter of Munich and as one who treated Neville Chamberlain with "adulation and sycophancy". According to Mr Barnett, the religious revival

BOOKS

Paying a high price for the new Jerusalem



Strube cartoon from the *Daily Express*, February 1943.

of the 19th century had spawned a hapless ruling elite whose woolly idealism had caused it to neglect the nation's armaments and to embark on the ruinous path of appeasement. In particular, he deplored the absence in 1939-40 of a powerful British army on the Western Front and the consequent loss to Germany of France and the Low Countries. This in turn drove the British into forfeiting their essential independence and into becoming instead a "warrior satellite" of the United States. His concluding words were that "British power had quickly vanished amid the stupendous events of the Second World War, like a ship-of-the-line going down unperceived in the smoke and confusion of battle".

It is tempting to quarrel with parts of this analysis. In particular, Chamberlain's policy at Munich can be depicted not as the product of woolly idealism but as an example of the hard realism Mr Barnett is supposed to favour. And the decision a year later to go to war with Germany for the sake of an East European country can be regarded as precisely the kind of chivalrous gesture Mr Barnett would normally condemn. As for Chamberlain's decision to neglect tanks in favour of fighter aircraft, lect tanks in favour of fighter aircraft, it was, to say the least, not self-evidently wrong-headed in the light of the narrow margin by which the British survived the Battle of Britain. All the same, I would not dissent from the central contention of the earlier book, namely that British power vanished amid the stupendous geopolitical events of the Second World War. Given that, what is surprising, however, is to see in the present book so much emphasis placed on the domestic battle between Wood and Beveridge. For even if Wood had prevailed the long-term prospects for Great Britain as a country of the first rank would

appear to have already been irretrievably ruined. Maybe, then, all that Mr Barnett is really attempting to establish in his present work is that with Wood's policies at least the British need not have fallen quite so far as they have. If so, a different line of criticism needs to be considered. It is that Mr Barnett assumes too readily that the supposed eating of the national seedcorn in the first postwar decade made inevitable the deindustrialization which has taken place since 1970. For many other countries have engaged in culling seedcorn - if that is how creating a welfare state is to be seen. For example, such relatively unglamorous countries as Denmark, the Netherlands and Austria started providing ambitious social programmes long before their wealth had begun to outstrip that of Great Britain. Indeed, if one had looked at the Western Europe of, say, 1960, it would not have been easy to show that there was anything inevitable about the development of the present economic standing of Great Britain in comparison with the aforementioned countries even if it might have already been evident that, say, West Germany was destined to leave her behind.

The decisive years for the current grievously acute form of impoverishment now being experienced by the British may, in short, not lie as far back as Mr Barnett supposes. Probably crucial here is the role of the industrial workforces and their trade unions. Mr Barnett sees the "British disease" as having become established by the Second World War and the failure of the Churchill Coalition to tackle it as seminal. Examples of strikes, chronic overmanning, demarcation disputes and card-playing in the bosses' time are cited and implied to be endemic. And Beveridge is inevitably mocked

for believing that the creation of a "New Jerusalem" would evoke an appropriate response from the unions: Trade-union restrictive practices "born out of a spirit of self-defence would become unnecessary as defences under full employment in peace". Beveridge saw no reason why full employment should lead to slackness at work or excessive wage demands. For 'Workmen have no love of idlers', while 'organised labour in Britain has sufficiently demonstrated its sense of citizenship and responsibility to justify the expectation that it will evolve, in its own manner, the machinery by which a better co-ordinated wage policy can be carried through'. Yet in the immediate postwar years the British trade unions did cooperate with both Labour and Conservative governments in aiding recovery and in curbing excessive wage rises. Naturally many shortcomings in the way of traditional work practices remained. But successive Chancellors (pre-eminently Sir Stafford Cripps) and successive Ministers of Labour (pre-eminently Sir Walter Monckton) held the TUC General Council in high esteem and saw no need to contemplate the kind of legislation that has been so contentious a part of domestic politics since Barbara Castle's attempted introduction of *In Place of Strife* in the late 1960s.

Moreover, the trade unions until around 1968 were also pillars of political moderation, ensuring with their block votes that the Labour Party set its face against every kind of totalitarian fellow-traveller. Certainly in the first two postwar decades American official observers regarded the British TUC as on the side of the West but were filled with foreboding about its opposite numbers in France and Italy, not to mention Czechoslovakia, in 1948. But Mr Barnett appears not to have grasped what was so evident to contemporaries.

Since 1968 a metamorphosis has of course occurred in the British trade union movement as the activities of Jack Jones, Hugh Scanlon and Arthur Scargill have demonstrated. And the price for the British nation in terms of political polarization and collective impoverishment has undoubtedly been high. But Mr Barnett in his determination to pillory the "New Jerusalem" generation, and Beveridge in particular, appears to want the reader to think that the contrast between, say, Arthur Scargill and Jack Jones is a detail of no consequence in explaining the country's precipitate decline. It is to be hoped that his further researches will persuade him to modify so one-dimensional and essentially unjust an assessment of the seminal developments of recent decades.

David Carlton is senior lecturer in international history at the Open University.

Fortunes of British welfare

British Economic and Social Policy: Lloyd George to Margaret Thatcher by G. C. Peden Philip Allan, £16.00 and £7.95 ISBN 0 86003 801 7 and 901 3

In this study of economic and social policy from the turn of the century to the end of the first term of the Thatcher administration, George Peden has attempted to trace the development of the "welfare state" in the light of the constraints set by economic and financial policy. He has, thus, attempted to integrate discussion of economic and social policy, two areas of study which have traditionally been carried out in isolation from one another.

Peden divides the period into seven chronological chapters, dealing with

the Liberal government's welfare reforms, the First World War and its immediate aftermath, the gold standard period in the 1920s, the aftermath of the slump, the period since 1973 when the control of inflation has been the dominant concern. By starting each chapter with a discussion of the economy and economic policy, Peden gives his readers a very clear understanding of, for example, the reasons for the cuts in housing and educational spending in the early 1920s and why interwar governments always believed themselves compelled to exert fierce control over central government expenditure. The need to retain foreign and domestic confidence in the enormous problems associated with unemployment, poor nutrition and inadequate education, and medical provision. First-year students ought to gain a much more sophisticated picture of economic and social policy than can be obtained from the standard textbooks on social policy, which tend to see the economy and economic policy as a "black box" which periodically forces bouts of retrenchment in social welfare expenditure.

Peden's approach works well for the period between 1914 and 1951, which is the real strength of the book. These four chapters represent a sustained attempt to survey the many policy options on economic and social policy which have appeared since the opening of the state papers in 1967. The author summarizes and synthesizes an enormous range of sources with considerable skill and clarity, and points his readers to the more detailed works in the field.

Outside these core sections of the book, there are, however, causes for complaint. The chapter on the period 1951-73 takes on rather more than it can achieve. Once again, Peden points out very clearly the economic background to changes in social welfare policy, but important developments in both economic and social policy have been omitted because of lack of space; industrial policy is badly neglected as the creation of Family Income Supplement and the problems with the low take-up of means tested benefits, all of which demand consideration even in a first-year textbook.

The final chapter is rather more

disappointing. The author may have a good understanding of how developments in social policy are constrained by economic and financial commitments, but his ideas on what has driven the British economy into even steeper comparative decline are poorly developed and the discussion of economic policy suffers as a result. Policy changes tend to be listed in a catalogue fashion without any clear guide to relative significance or pattern. The treatment of social policy is again cramped. Are we currently witnessing the end of the "welfare state"? Are there alternatives in economic policy? The author does not pose the questions.

The author's failure to consider alternatives can be taken further. Peden's main claim to originality is his attempt to integrate discussion of economic and social policy. However, Marxist literature has always proclaimed that its great virtue is to see economy, society and policy as a coherent whole, and it is interesting to compare Peden's text with a similar work from this tradition, Ian Gough's *Political Economy of the Welfare State*. Gough's greatest strength is in setting out his analytical position in consider-

able detail. He sees the "welfare state" as a contradictory phenomenon, a means of both moderating working-class political pressure and of reproducing existing exploitative relations in society. Moreover, the concessions won by the working class in the form of increased welfare spending play a leading part in the analysis of the crisis in the capitalist economic system by generating barriers to further accumulation. Peden has no such clear idea of how things fit together nor has he risen to the challenge posed by Gough and the growing Marxist literature on the welfare state. Peden's theoretical position, such as it is, is contained in a single paragraph in the preface. This is a great pity. Non-Marxist writers on the welfare state are under a considerable intellectual challenge from an alternative, radical perspective. Peden's readers could have expected rather more than a simple synthesis of empirical literature.

Alan Booth

Alan Booth is lecturer in economic and social history at the University of Sheffield.

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14 Leicester Square,
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BOOKS

Selling strategies

Advertising the American Dream: making way for modernity, 1920-1940
by Roland Marchand
University of California Press, £23.50
ISBN 0 520 05253 6

The battle lines are now pretty well drawn up in the literature on American advertising and its relation to society. On one side are the radicals who claim that advertising is part of a corporate machine that misallocates the nation's wealth and buys off and "privatizes" a working class that might otherwise rebel. On the other, we have the defenders, or tolerant accepters, who argue that advertising does not shape social attitudes: at the worst it is frivolous; at best it assists consumer choice and prosperity. Among American historians much of this debate has focused on the 1920s when a consumer society, backed by a wide variety of mass-produced goods, was firmly established.

Advertising the American Dream speaks to the debate but also leads away from it, into new and fascinating channels. It considers how advertisers exploited social and economic trends in the 1920s, and how they adjusted when the 20s boom faded in. It combines a historical sociology of the period with an analysis of sample ads (profusely sprinkled through the text) and a study of what advertising men (few women) thought of themselves and their audiences. It is also a history, treating advertising design as visual rhetoric, and showing how it borrowed freely from both classical and modern painting to hype its products — much as music does in television advertising today. By the late 20s many advertisers had discovered that artwork could give an allusive authority to a message that would be ridiculous in words. The lavishly-seated ad produced "The Sea of Eternal Whiteness" invited ladies, the advertiser would have done better to follow the trend and bathe his product in a halo of light.

Roland Marchand claims that advertisers reflected and reinforced cultural trends rather than creating them. He concedes that they stressed the cultural business side of these trends: for example, they presented women as modern, professional consumers but they still kept them in the home. Marchand argues, however, that advertising did authentically correspond to the success aspirations of a large middle class. It sold health and looks as assets for improving one's chances in the marketplace as well as

with neighbours and friends. That marketplace, as presented in the ads, was mainly white-collar; manual workers were seldom more than supporting actors. Marchand believes, indeed, that advertisers neglected the poorest 30 to 65 per cent of the population — an estimate which presumably challenges the radical notion that advertising sanctified the American working class.

The author's main thesis is that advertising encouraged its audience to "modernize", to keep up with what was new and fashionable in consumerland. It helped people adjust to a dense, urban society of large impersonal organizations and frequent encounters with strangers. Thus, the "Parable of the First Impression" — one of several key "parables" told by advertisers in the period — stressed the importance of using the right soap or shirt to make an immediately favourable impression on a customer or potential employer. At the same time, says Marchand, advertising provided reassurance: comforting images of small town life and the open road, touches of class that "you can have too"; and a plethora of expert counsel on the right colour ensemble and lifestyle. Advertising "repersonalised" society, offering pseudo-intimate advice to people who felt far from home.

Underlying these appeals, Marchand says, was a shift in the culture from a concern with the problems and disciplines of basic production to a stress on marketing and consumption. It paralleled in child-rearing and shift from "dos and don'ts" to stimulation and entertainment. The author does not claim to have discovered such shifts, though he signally fails to credit David

Riesman, the first interpreter of American society to build them into a theory of social change. He also gives scant attention to studies showing that American advertising since the 19th century has been more psychological and symbolic, attaching importance to social status and what others thought. Such studies may seem to be in line with Marchand's historical thesis, but the problem is that we don't know how much of the change in advertising was due simply to admen getting smarter rather than to underlying social attitudes. The anxieties attributed by Marchand to a new, impersonal social order of cities and bureaucracies in the 1920s have been attributed by other historians to a similar society in the 1890s, and so has the rise of mass advertising and advertising to get rid of surplus production. My own view is that, following the late 19th-century shift to mass organization and selling, the culture did change in the 20th century: that in the age of the crowd, people smiled more for approval. But that is not much more than a guess.

This problem aside, *Advertising the American Dream* is a fine book lucidly argued, readable, prodigiously researched, and beautifully illustrated. The illustrations invite more analysis than is given, and some of them need a magnifying glass. But it is always nice when a writer leaves a worthwhile task to the reader. If only to mock the consumer dependence that threatens American individualism.

Rupert Wilkinson

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Notes of loneliness

Randall Jarrell's Letters: an autobiographical and literary selection
edited by Mary Jarrell
Faber, £25.00
ISBN 0 571 13829 2

This is a labour of 18 years' devotion on the part of Jarrell's widow, Mary. The volume's interest resides not only in Jarrell's own letters, but also in the many observations and assessments of him by others, in the biographical information that Mary Jarrell discloses, and not least in her own vivid character-sketches. There is a nice recollection, for instance, of Lowell and Jarrell in conversation, during which "Lowell spoke in long, halting sentences that Jarrell darted in and out of, but that Lowell, unperturbed, never seemed to notice." Jarrell, in fact, was a man of few words, most exact, precisely descriptive.

The letters begin in 1935, when Jarrell had just turned 21 and was studying psychology at Vanderbilt University. While in this midst of the Depression he was espousing Marxist

politics, he was at the same time being taken up by the conservative or, more accurately, reactionary writers. In particular, "Red" Warren, Allen Tate, Donald Davidson, and the revered elder of the group, John Crowe Ransom, never referred to in these pages in any form other than as Mr Ransom. He was writing Auden-esque poetry and brandishing a precocious "arrogant" thought (Tate originally). Jarrell followed Mr Ransom to Kenyon, and thereafter earned his living as a university teacher, apart from three years in the Air Force during the war, a stint in New York as literary editor of the *Nation*, and two years in Washington as poetry consultant to the Library of Congress. In 1964, around his fiftieth birthday, he began to suffer debilitating, barely tolerable depressions. He spent months in hospital, often heavily medicated. On October 14, 1965, while walking along a road near his university, he was struck by a car and killed instantly.

Jarrell was surely right about himself when he told Lowell that "the army big war" was much of his best poetry. There is a sad irony, however, in his frequently reiterated dislike of reviewing and essay-writing, because his

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Herbie Butterfield

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1825 when a mob attacked the Shaker Community at Pleasant Hill, Kentucky. As a result of his father's interest William Byrd eventually went to live at Pleasant Hill and from there wrote the 19 letters to Charles Byrd survive his father long, but died convinced that his father had been wrong. In Mother Ann Lee had inaugurated an apologist for the Shakers, and had come to rely on the emotional support of this quasi-monastic group: like many Americans, he was drawn to an alternative society of a non-competitive kind.

Professor Stein rather underestimates the importance of the physical illness of both Byrds, who were healthy, diet, manual labour and sexual abstinence, and probably hoped for a Stein says, give us a rare glimpse of the spiritual mentality of the Shakers, but own decision to join the Shakers, despite from various kinds of personal suffering, was no more surprising than among High Church Anglicans in the 1830s.

William Booth's book, *Darkest England* (1890) had set out a scheme for relieving urban poverty by transferring the poor to the land under the auspices of the Salvation Army. His views

derived from many earlier 19th-century back-to-the-land plans for social regeneration. America offered obvious opportunities, and when Booth's daughter, Emma, and her husband Frederick Booth-Tucker, took over the young American Salvation Army in 1896 they pushed ahead rapidly with three of these experimental settlements. In *The Salvation Army Farm Colonies* Professor Clark Spence of Illinois University has studied in detail the not very remarkable history of Fort Romie in California, Fort Amity in Colorado, and Fort Herick in Ohio. Fort Herick failed quickly, but despite the moderate results obtained at the other two Booth-Tucker persisted to introduce a bill in 1904 which would mean making the United States government instrument of colonization of about 100,000 acres in the public domain. This bill died, and Tucker, with William Booth's agreement, then tried to write a gigantic scheme for settling British poor on 240,000 acres in Canada.

As a result, Rider Haggard, romantic novelist and farmer, was sent by Alfred Lyttelton, Secretary of State for the Colonies, to inspect the Salvation Army experiments in America. Although Haggard, who was emotionally committed to the Salvation Army and to rural schemes for social progress, himself reported

favourably, a Colonial Office committee decided, very sensibly, that there was no exorbitant or thoroughly successful work of this kind, and that management by a religious body was not desirable. Defeated in their attempts to obtain public money, and unable to raise enough from private sources, the Salvation Army leaders turned to assisting British emigration: between 1906 and 1909 they sent more than 50,000 people to work for Canadian farmers, or in lumber camps, or on railway-construction. In the United States no more farm colonies were financed, and the two survivors dwindled away.

Professor Spence's modest book is perhaps the most illuminating on the early Salvation Army yet written; it is thoroughly researched, and he shows very clearly the gap which often existed between the army's language and its performance. Moreover, the failure of the farm colony scheme was decisive for the army's future: the leadership had to come to terms with a minor role in urban religious work. Professor Stein's equally well-written book on the Shakers reminds us of an earlier failure to find redemption in a Christian arcady, but he tells us less about the reasons for that failure.

John Kent

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BOOKS

The will to live

The Value of Life: an introduction to medical ethics
by John Harris
Routledge & Kegan Paul,
£15.95 and £7.95
ISBN 0 7100 9895 2 and 0 7102 0437 X
Death, Brain Death and Ethics
by David Lamb
Croom Helm, £15.95
ISBN 0 7099 1690 6

The Value of Life joins books like Jonathan Glover's *Causing Death and Saving Lives* and Michael Tooley's *Abortion and Infanticide* as part of a growing body of philosophical works which challenge, in a very fundamental way, conventional ideas about the sanctity of human life. Such a work is especially welcome at a time when there is so much thoughtless rhetoric about the immorality of experimenting on non-sentient, while painful experiments on rats, dogs and baboons continue to be carried out. Why, these philosophers all ask, should membership of the species *Homo sapiens* be so special?

The answer they all give is that mere humanness, in the biological sense, cannot be morally crucial; and they then begin to search for qualities which might justify regarding the life of a normal human adult as being more valuable than that of a lettuce or a dog. The answer Harris gives — and it is given by Glover, Tooley and others — is that the value of life for each individual consists in that person's own reasons, whatever they may be, for finding life valuable and for wanting to go on living. This means that the reason my life is more valuable than the life of a lettuce, is that I value my life and want to go on living. The lettuce does not.

This point has radical and profound implications for our views about the wrongness of killing certain beings. The lives of plants may have no intrinsic value, but what of the lives of other non-human animals? Harris is not sure that chimpanzees can value their own lives in the required manner, although he is prepared to give them the benefit of the doubt. (He gives the attention to the question of whether other non-human animals might be equally deserving of such a benefit.) Harris is more concerned with the application of his view to human beings, and parts of his book spell out the consequences of that view for medical ethics.

Embryos, obviously, cannot value their lives. Harris says that we should think of their moral status in the same way we think of the moral status of "any other creatures of comparable capacities". This evidently gives the embryo, at least, a very lowly moral status. Once the embryo can feel pain, this capacity must be taken into

account, but this could only happen some time after conception — Harris suggests after 14 weeks — and even then these of anaesthetics could overcome the problem. Harris also inquires whether the consent of the mother should be required, and argues that it should not. (He does not ask about the father.) He concludes his discussion by arguing forcefully that the Warnock Committee's proposed 14-day limit on embryo experimentation has no sound basis, and that we should allow embryos to be used to benefit people, as long as no pain or suffering is involved for the embryos.

Consistent with his view on the value of life, Harris suggests that those people who do not value their own lives should be able to end them when they choose; and should be assisted to do it, if they cannot do it themselves. Readers of Harris's earlier book, *Violence and Responsibility*, will not be surprised to find him highly critical of the "inexorable myopia with regard to negative responsibility" which a government, with relatively little outcry, to doom people with kidney disease by refusing them medical assistance on the grounds of expense, while that same government will not allow people with terminal disease a means of ending their own lives when they choose.

Consistent with its subtitle, the book attempts to cover areas such as medical paternalism, consent to clinical trials, and confidentiality. The result is a broader but less unified book than the main title suggests. However, although the book could serve as an excellent introduction to the philo-

sophical study of questions relating to the value of life for philosophy undergraduates, it may be too far removed from everyday medical practice to appeal to more practically-minded medical students or other health professionals as a textbook in medical ethics.

David Lamb's book suffers from no such ambivalence about its scope, tightly focusing on the controversy that has arisen since "brain death" came to be used as an alternative to traditional criteria for patients who were being artificially ventilated. Since then, there has been considerable confusion about what brain death is, and whether the idea is a new understanding of death, or simply a new criterion for deciding when death has occurred.

Lamb's view is that there is only one concept of death, and this is that the organism as a whole has ceased to function. The organism as a whole ceases to function only when the entire brain — which includes the brainstem — is dead. The traditional test of the irreversible loss of heart and lung function was only a way of predicting death — reliable enough before modern methods of resuscitation, but not adequate in our hospitals today. The irreversible loss of brainstem function is the crucial element which ends the existence of the organism as an integrated whole.

This is an attractive and plausible position. Its chief merit, as Lamb reiterates, is that it allows for the clear separation of the medical question of when death occurs, and the ethical question of when we should stop trying to keep a person alive. Yet on this very

For your own good

Moral Dilemmas in Modern Medicine
edited by Michael Lockwood
Oxford University Press,
£12.95 and £4.95
ISBN 0 19 286056 9 and 21743 5

Arguments about moral problems in medicine are currently providing endless entertainment for all sorts and conditions of men. In such a climate, where virtually every newspaper makes headlines out of advances in medical science, it is obvious that the debate will benefit greatly by the sort of inter-disciplinary perspective provided by *Moral Dilemmas in Modern Medicine*, the editor of which has gathered together contributions from other philosophers, doctors and a lawyer.

Each contributor deals with medical ethics from the viewpoint of his particular discipline, but it is interesting to see how they all use much the same language and much the same skills. Herein, I suspect, lies the benefit of the recent debates. Doctors know what the philosophers mean; and vice versa. This cuts out much of the argument about potential and paternalism no longer leaves the average doctor cold or puzzled; indeed, these concepts have entered the columns of all but the most remote and



Mrs and Mr Gillick at the Law Courts.

misable medical journals. There is much of great value in this readable and sparky book. Michael Lockwood introduces the subject with his observations on the question as to when life begins — a problem requiring a degree of bravery in those who address it. It is the essential issue in abortion; and it is crucial in the area of inter-disciplinary perspective. Suggesting that philosophical concepts of identity provide some assistance here, Lockwood proceeds to argue that being a person, and therefore deserving the protection that we normally accord to persons, depends on having a human brain. This cuts out much of the argument about potential and paternalism no longer leaves the average doctor cold or puzzled; indeed, these concepts have entered the columns of all but the most remote and

between the fetus with no brain and the fetus in whom certain neural structures associated with sentience have developed. The implications of that for abortion law are obvious and will not be liked by advocates of late abortion. Ian Kennedy's very well-argued contribution, on the issue of whether Mrs Gillick as mother of a 15-year-old girl was entitled to be informed by the doctor if her daughter sought contraceptives, was written before the House of Lords finally ruled against her, but the arguments he puts forward have largely prevailed. Kennedy argues that Mrs Gillick is in the wrong on numerous grounds, one of which is that of parental rights. Parents, he suggests, should allow their children to make their own mistakes — yes,

perhaps, but I wonder whether parents should not have the right to protect themselves from emotional pain. If a promiscuous 15-year-old causes distress to her parents, have they no right to protect themselves by attempting to stop her behaviour? Few would hold this position seriously, but it may be that there are many parents who would very much appreciate a diminution of the importance attached to the rights of children and a consequent placing of greater emphasis on the rights of parents, not as "trustees" for their children (Kennedy's term) but as people with interests of their own. In practice, of course — as any number of people have pointed out to Mrs Gillick — neither doctors nor parents can "stop" girls having sexual intercourse.

Autonomy and paternalism lie at the heart of many problems in medical ethics. Raelin Gillick (editor of the *Journal of Medical Ethics*), who has achieved a great deal in introducing doctors to the philosophical implications of their practice, reflects on medical paternalism, which he feels still underlies many of the decisions taken by doctors. Autonomy, he argues, must always be respected, although there are circumstances where the ability to decide will be affected by illness. This view is borne out by the contribution from Roger Higgs, an expert in general practice matters, who argues strongly against the medical lie. This is not an easy subject and is one best handled by those who, like Dr Higgs, have experience in dealing with patients for whom the prognosis is bleak. We are told that it is wrong to assume that the terminal ill do not want to be informed of their prospects. Indeed, Higgs quotes studies clearly indicating that most patients in that position really do want to know, although the manner of their being told must be sympathetic. Circumstances in which a doctor may lie to a patient, the justification for this must be strong. This approach is moral miles away from the arrogance of traditional medical paternalism.

It is a considerable merit of this book that it includes theoretical debate as well as more practical contributions. Professor R. M. Hare, for example, discusses the ethics of medical research on children, while in an exceptionally thought-provoking essay Dr J. B. Muir Gray, a physician, concentrates on the problems of removing the elderly and incapable people from their homes. It is all very well to pay a lot of attention to the higher reaches of medical progress (which, as Lockwood aptly puts it, gives rise to much "high-tech" medicine), but it is equally important to be aware of the real world in our society, the elderly. Elderly people are not infrequently coaxed or coerced into accepting medical treatment or a bed in an institution. By exploring the implications of this, Dr Gray's essay represents a valuable addition to the literature on a rather neglected topic and enhances this excellent and most stimulating book.

Alexander McCall Smith

Alexander McCall Smith is associate dean of the faculty of law at the University of Edinburgh.

The evidence is clearly less secure than that which has provided the basis for the control of such physical diseases as plumbism, accidents, and lung cancer. The application of public health principles depends on political action, and perhaps understandingly decision-makers have so far done relatively little to mitigate mental ill-health by means of environmental legislation. None the less, the ruling of the United States Appeals Court against the generation of electricity at a nuclear power station until it can be shown that psychological well-being is unimpaired by new set of values, which transcend the personal and somehow enable us to think of the future not in terms of ourselves, but of our successors on Earth.

Michael Shepherd

Michael Shepherd is professor of epidemiological psychiatry at the Institute of Psychiatry, London.

A fourth edition of *Mental Deficiency*, edited by A. M. Clarke, A. D. B. Clarke and J. M. Berg, has been published by Methuen at £40.00.

This broader concept of the environment has gradually entered the domain of public health, which has come to acknowledge the importance of the psychological and social milieu along with hazards in the physical environment and infectious diseases. This awareness has been accompanied by the study of mental ill-health in its environmental context, the major objective of social psychiatry, which has been defined by a World Health Organization Expert Committee as "the preventive and curative measures which are directed towards the fitting of an individual for a satisfactory and useful life in terms of his own environment". This book indicates what is involved.

Despite its rather ambitious title, the book is concerned with only a few of the broader issues. It excludes any consideration of the immediate family, sociological grand theory, toxicological pollutants, natural disasters, mental handicap, or the therapeutic milieu and other aspects of environmental psychology. Its emphasis is principally on the impact on mental health of people's surroundings as expressed in their homes, districts, regions, and sometimes countries. The 17 chapters are sub-divided into three sections. The first of these, entitled "The scientific background", contains a long,

rambling essay by the editor, followed by papers on crowding, aggression, urban delinquency and, most authoritatively, a survey of the ecological approach, by a professional geographer. The second is devoted to specific issues related to mental ill-health — housing, noise, urban factors, residential mobility — and the final section comprises a group of case-studies, three in British cities and one a survey of developing countries. A belle-lettristic epilogue by an environmental architect, "Continuity and sense of place: the importance of a symbolic image", rounds off the material.

What emerges from the mass of observations and comment in these papers? By and large, the impact of the environmental factors discussed seems to be experienced not so much in terms of overt mental disorder as of the so-called "subjective indicators" which have to do with the quality of life — the degree of satisfaction and dissatisfaction in particular groups of individuals. Further, the demonstration of such effects calls for their assessment in medico-social rather than exclusively clinical terms.

As for the practical outcome, the editor in his introduction rightly emphasizes the fact that "psychiatry contribution to social development [is] so far very unimpressive", for much of

BOOKS

ENVIRONMENTAL SCIENCES

Rural landscape

An Introduction to Rural Geography
by Andrew W. Glig
Edward Arnold, £7.95
ISBN 0 7131 6430 1

The University of Exeter has in recent years become a centre of excellence for the geographical study of rural areas. Alongside the valued work of Mark Blackwell, David Phillips and Allan Williams, we now have a third book from Andrew Glig who also edits the annual *Countryside Planning Yearbook*. In this mainstream textbook on rural geography, Glig attempts to provide an account not only of the content of rural geography but also of the approach of rural geographers to their topic. However, although he has no difficulty in achieving the first of these aims, of offering an authoritative, well-referenced and closely-argued analysis of the content of rural geography, his analysis of the approach of rural geographers is more contentious.

In defining rural geography as "what rural geographers do", Glig exposes the inherent diversity of researchers who either choose to stand under the rural geography banner or who are rather artificially so located by contemporary syntheses. As a result, a close scrutiny of rural geography reveals a ragbag of economic, social, political, environmental, resource, ecological and other approaches which are integrated only by their claimed interest in rural (or non-urban) phenomena. The conclusion therefore that rural geography remains obstinately eclectic and theory-free is a direct antecedent of

the adopted definition of the subject which concentrates on research activities and subjugates the wider-ranging theoretical and philosophical underpinnings of the different participants. Given the diverse ingredients of this particular recipe, it is understandable that the chef has to struggle to blend together a palatable dish of rural geography approaches. We even find a soupçon of David Harvey thrown in to add spice to the dish, on the basis that his doctoral thesis dealt with agriculture and rural change in Kent. Harvey (as Glig acknowledges) turned his back on rural geography per se in favour of more radical approaches to economy and society in the urban sphere. It must be emphasized, however, that several researchers have declined to follow Harvey in this respect, by addressing major issues of political economy and yet maintaining their interest in rural localities. It is all too easy to fob off these increasingly important approaches as merely "radical", while clinging fast to the centrality of the study of rural environments using the more traditional geographical values and approaches of a broadly positivist idiom.

Glig is careful to credit the full range of approaches adopted by rural geographers, but imbues his text with the somewhat partial, if majority, view that rural geography has clear priorities in favour of study of the rural environment and land use. A corollary of this preoccupation is that studies of society, community and to some extent economy have to be fitted in around the environmental core. Thus, rural housing research is seen in the context of houses being "individual components of rural settlements", thereby perpetuating the traditional emphasis on housing as a potentially attractive component of the rural landscape rather than as the market-place of unequal competition for the right to live in a particular location. Although Glig quite properly outlines both these views, only the first fits happily into his broad scheme.

Similarly, suggestions that priority

in rural planning should be given to the needs of deprived groups is viewed as ignoring the fact that "the majority of rural inhabitants are very satisfied and happy with their life-style" and are "less concerned with socio-economic issues... more with the changing environment of the countryside". By contrast, it might be suggested that rural deprivation has become important despite, rather than in ignorance of, these factors.

These preoccupations are crystallized in the book's conclusions. On the one hand, calls for a conceptual framework for rural geography are seen to be a "red herring" or a "passing academic fashion". The subject is said to be broadly theory-free. On the other hand, the theoretical choices in fact seem to have been made already in the author's mind. Glig's closing thought is that "the best concept for rural geography is a spatial one".

the study of effective land uses or activities in which the friction of distance plays a major role". By this, he means that as rural areas are different from urban areas, they represent discrete spatial units for study, factors like remoteness and marginality being indicative of what essentially makes rural different from urban. Contemporary spatial science, on the other hand, would suggest that all types of area - urban and rural - are subject to the same structural influences.

Clearly, an important division is becoming apparent in rural geography between positivist approaches which emphasize rural areas as discrete spatial units of study, and political ecology approaches which recognize that all types of locality are subject to nationally (and internationally) derived processes of economic restructuring. "Rural" is therefore a somewhat false theoretical category. A



Rowlandson's view of rural life is illustrated in David Souden and David Starkey's *This Land of England* (Muller, Blond & White/Channel Four, £14.95).

Paul Cloke

Paul Cloke is senior lecturer in geography at Saint David's University College, Lampeter, and editor of *Journal of Rural Studies*.

The report of the Scientific Committee on Problems of the Environment (SCOPE) of the International Council of Scientific Unions on the Environmental Consequences of Nuclear War has been published in two volumes by Wiley. Volume one on the *Physical and Atmospheric Effects*, edited by A. B. Pittcock et al., is available at £35.00 and volume two on the *Ecological and Agricultural Effects*, edited by M. A. Harwell and T. C. Hutchinson, is available at £43.50.

ture - which he reviews exhaustively - and on the North American and British farming industries for much of his illustrative material. This represents a narrower perspective than might be anticipated from the book's title; but at least it concentrates on what he knows best. Finally, in terms of method, he adopts a behavioural stance suggesting that "it is the farmers' reactions to, and perceptions of, changing economic circumstances that have to be considered if a realistic understanding of agricultural land-use patterns is to be obtained".

It is this perspective which provides the book with its distinctiveness and importance. The book contains significant chapters on farmers' decision-making, innovation diffusion and the responses of individual producers to economic signals, all supported by numerous examples of detailed, empirical research arising from farm-level surveys. His methodological position will not, however, find favour with all those who advocate a behavioural approach. It relies heavily on the belief that the researcher can define, measure, model and statistically analyse farmers' attitudes and behaviour patterns of behaviour; and it relegates the more interpretive humanistic concerns for individual identity and outlook. Perhaps this is why the work of agricultural economists is more fully discussed than that of rural sociologists, with only limited treatment accorded to changes in social structure, especially to farm family composition, and culture (ethnically, religiously and linguistically). It may also explain why the author reviews data sources and techniques of analysis so effectively but provides us with few insights into how he sees the links between his position and those of related critiques which emphasize the relations between structure and agency.

For teaching purposes, the book has other major strengths. In particular, the author presents valuable syntheses of geographical research into urban-fringe farming, government policy, farm structure and agribusiness development, each account based on an extensive and up-to-date bibliography. An effective use of examples, critiques of particular data sources and debates, and plenty of illustrative material. More importantly, Libery's review should be read critically by all students of agricultural geography, however advanced, as it is bound to sharpen their own views as the best means of investigating and evaluating land-use change. Those who remain unconvinced by his arguments will at least have a substantive text on which to draw.

Richard Munton

Richard Munton is reader in geography at University College London.

Water quality

Marine Pollution
by R. B. Clark
Clarendon Press: Oxford University Press, £19.50 and £9.95
ISBN 0 19 854183 X and 854182 1

Marine pollution caught the public's attention in the late 1960s and early 1970s as a consequence of media effects of oil spills, water quality problems in estuaries, and the discharge of radioactive wastes to coastal waters. During this period, considerable research was undertaken on the distribution of pollutants in the marine environment. It was from that research that much of the present-day legislation was formulated.

During the past decade, the subject has declined - due to budgetary constraints on monitoring programmes and basic research. Also, the legislation cannot properly be enforced because of a lack of funds. A recent report produced by the House of Lords and Technology, however, identified the need for a national research strategy for effective exploration and report suggests that this could be achieved if a key component of the strategy involved environmental problems in estuaries, coastal waters and the open ocean. If, as proposed, the Department of the Environment and the Ministry of Agriculture, Fisheries and Food had a greater involvement in research, this would produce the political will to fund some of the more urgent programmes of basic and applied research. Given this renewed interest in marine affairs, Professor

Geoffrey Millward

Geoffrey Millward is principal lecturer in oceanography at Plymouth Polytechnic.

BOOKS

ENVIRONMENTAL SCIENCES

Fossil cache

The Burgess Shale
by Harry B. Whittington
Yale University Press
In association with the Geological Survey of Canada, £21.00
ISBN 0 300 03486 6

In August 1909 Charles Doolittle Walcott split open a slab of shale lying beside a mile track in what was then a remote part of the Rocky Mountains of Canada. As the light caught the split surface it revealed the traces of a new and wonderful kind of fossil, displaying numerous legs and a pair of feathery antennae. Much later, Walcott would christen it *Marrella splendens*.

Walcott realized immediately what he had found - a geological miracle. For here, in a shale of Cambrian age



Charles Walcott standing on a fossiliferous layer in the Burgess Shale and holding one of the long iron bars used in levering out slabs of rock.

Mineral optics

A Practical Introduction to Optical Mineralogy
by C. D. Gribble and A. J. Hall
Allen & Unwin, £18.00 and £8.95
ISBN 0 04 549 007 and 008 2

In such a wide-ranging subject like geology the possibility of purchasing a textbook which embraces more than one branch is attractive to students and teachers alike. Intended as "an introductory text or a first stepping stone to the study of optical mineralogy", this book deals with the theory of optics for both transmitted and reflected light microscopy. It can also be used as a laboratory handbook, as it provides a description of the properties of the more common minerals both transparent and opaque.

The first chapter outlines a plan for the systematic description of minerals, first in transmitted light and then in reflected light. Chapters two and three consist of systematic descriptions of minerals, 100 pages being devoted to the silicates and about 50 pages to the non-silicates. Chapter four treats the theory of optical mineralogy in transmitted light and chapter five in reflected light. Tables of refractive indices of minerals, optical axial angles, and properties of ore minerals are added as appendices.

The main part of the book is taken up with the description of the more common minerals as seen under the microscope. Three-dimensional drawings showing within the crystal the position of the cleavages, the optical axial plane and the optic axes, are given for the transparent minerals. It seems a pity, however, that only in the case of a few minerals are there drawings of the appearance of the mineral in polished section; of the transparent minerals only microcline is a photomicrograph.

The list of properties given for each

(about 530 million years old), was the fossil of an organism showing all its preserved parts. Fossils normally only preserve the hard, resistant bits - shells or bones - that are not subject to decay. Walcott went on to search the ridge between Mount Wapta and Mount Field until he had located the exact layer from which the block had been derived. And from here he collected a rich variety of astounding fossils that changed our perception of the history of life at this distant stage in the evolution of the biosphere, opening a clear window on a world usually obscured by the vagaries of the fossil record.

From the Burgess Shale, Walcott recovered many different kinds of fossils of soft-bodied marine animals, mostly of completely unknown kinds. Even those animals that were previously known from their hard shells - such as the trilobites - were preserved in astounding detail with all their limbs, which normally decayed without a chance of being fossilized. The Burgess Shale fauna became the most famous discovery of Walcott's varied career. He published photographs and descriptions of the extraordinary fossils he had found, partly to confound the sceptics who might have doubted their reality. He recorded a wide array of arthropods - the jointed-legged animals that include living spiders, insects and crustaceans - including many kinds that had little similarity to

any species known from the living fauna. The total is now some 43 different genera but there were also many different kinds of "worms" which had previously had virtually no fossil record at all. The fauna also included sponges, algae, echinoderms, and what was almost certainly the earliest chordate, a distant cousin of the vertebrates, and, by extension, the first record of the group that includes our own species.

Walcott left his work incomplete when he died. There was much that could be revealed about these wonderful fossils with modern preparation and photographic techniques. In 1966, Professor Harry Whittington, now emeritus professor of geology at the University of Cambridge, directed a reopening of Walcott's site and made extensive new collections in that and the following year. Since then Whittington and his colleagues have been publishing meticulous studies of the Burgess Shale animals in the pages of scientific journals. This book makes some of these results available to a wider public and, most important, provides some 50 pages of excellent photographs of the fossils. The reader can judge for himself that these creatures are as remarkable in their diminutive way as the dinosaurs, so much younger geologically, that capture most of the popular interest in palaeontology.

In a clear and unassuming style Professor Whittington describes the significance of each kind of fossil. He explains how the Burgess fauna was preserved so miraculously: the living animals were carried in a slurry of sediment - set in motion as an unstable slope foundered - into an environment entirely without oxygen, where they could be preserved as fossils without further decay. Such special combinations of circumstances are inevitably exceedingly rare, which is why the Burgess Shale remains unique.

Some of the animals described are truly fantastic, so strange that they cannot be classed with any known living animal. The bizarre (and aptly named) *Hallucigenia*, for example, was a spiky oddity which may have clustered as a scavenger on corpses. The giant of the fauna *Anomalacaris*, perhaps half a metre long, has a unique plumed mouth (originally described as a distinct animal) and a pair of jointed limbs on its head, like an arthropod, but with strange, almost squid-like flaps along the side of the body. It seems as if the features of these animals were pulled at random out of a hat and strung together in combinations designed to nonplus evolutionary biologists. The book should be recommended reading for all those who like to regard the evolutionary ladder as a series of rungs leading simply upwards and upwards. The special insight provided by the Burgess Shale fossils shows how complex the real story may have been.

Richard Fortey

Richard Fortey is in the department of palaeontology at the British Museum (Natural History).

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BOOKS

ENVIRONMENTAL SCIENCES

Crustal record

The Continental Crust - Its composition and evolution: an examination of the geochemical record preserved in sedimentary rocks

by Stuart Ross Taylor and Scott M. McLennan

Blackwell Scientific, £16.80

ISBN 0 632 01148 3

The continental crust preserves the only record of all but the most recent geological processes that have shaped the history of the Earth. When and how the continental crust formed, the conditions in the Earth at different stages of its evolution, and although the crust is less than one per cent of the mass of the Earth, it is a repository for many of the rarer elements, so that its formation also helped to determine the composition of material in other reservoirs within the planet. Thus, any book on the composition and evolution of the continental crust is addressing very major questions in geology.

The crust is the hard outer layer of the Earth, consisting of a number of rigid plates that move slowly on the convecting material beneath. In oceanic crust, crust is generated and destroyed in comparatively short periods of time, whereas in the continents the crust is lighter and so rides above such tides of destruction. It preserves rocks which are almost four billion years old, and considerable attention has been given to the extent to which conditions and processes may have changed in that time. Some have argued that all the continental crust formed early in Earth history and that since then the crust has simply been heated and reshaped in a succession of younger events. Others, and they now represent the majority, prefer models

in which the continental crust has been generated throughout much of the Earth's history, albeit at ever-decreasing rates.

Typically these debates have relied on measured variations in radiogenic isotopes. As these are produced by radioactive decay, they provide an invaluable method of dating geological events and of determining chemical changes with time. What is striking about the work of Professor Taylor and his colleagues at the Research School of Earth Sciences of the Australian National University is that they have sought to study the evolution of the continental crust by other means. They have concentrated on the chemistry of sediments of different ages: not so much on the major elements, for they often show little change, but on the trace elements. Although these may only be present in a few parts per million, they are highly sensitive to changes in source composition.

Taylor and McLennan's book is not a review of the field in the traditional sense. Rather it follows a comparative approach, emphasizing what they regard as important problems in their field and discuss how these might be tackled. Much better than such a book is encouraged to tell us what they think, rather than simply to summarize the state of the art. The result is a stimulating and at times provocative book which conveys something of the excitement and the imponderables in crustal geochemistry. The reference lists are comprehensive and up to date, but there is little room to explore the assumptions behind common geochemical practices. The book is aimed at geoscientists, who will need to be reasonably well versed in the subtleties of trace element and radiogenic isotope geochemistry.

Chapters one to eight summarize available information on the composition of the Archaean (more than about 2,500 million years old) and the post-Archaean crust. The natural processes of erosion and sedimentation provide average samples of the exposed crust. Heat flow data and analyses of granulites are then used to estimate the composition of the lower, and hence the total, crust. However, as tables of average compositions tend to look terribly convincing, it is important not to forget the problems and errors involved in obtaining averages of any-

thing as heterogeneous as the continental crust. Nevertheless, the differences between Archaean and younger crusts, which are inferred to reflect fundamental changes in the composition of the bulk crust about 2,500 million years ago. It is argued that this is due to the shift from basaltic to granodioritic-granitic compositions in the younger crust. Crustal differentiation processes related to melting at mantle depths in the Archaean and then subsequently at crustal depths.

The next three chapters explore the implications of the geochemical data for models of continental crust formation: how rates of growth varied with time; and the nature and effect of interactions between the continental crust and the upper mantle. A chapter on the crusts of other planets provides insights into the early nature of the Earth's early crust.

Richard Taylor's book is a geological record. Arguments for sedimentation rates, the height of continents above mean sea level, radiogenic isotopes, and minor trace elements are woven into a red model in which over 50 per cent of the continental crust was generated in the late Archaean; since then, crustal growth has continued at an ever-decreasing rate. Crust formation affected perhaps 30-50 per cent of the Earth's mantle; and although some crust is returned to the mantle via oceanic basins, the amount is small (less than 0.3 cubic kilometres of sediment per year). The Earth probably melted during accretion, but the early crust was likely to have been basaltic or komatiitic, rather than granitic.

The debate on the origin and evolution of the continental crust is very much alive. This book provides a pleasing mixture of well-researched and up-to-date information, ideas and comment, set out in a clear, concise style. The views of an influential research school are boldly and succinctly laid out and undoubtedly deserve to be digested and questioned in order to stimulate new ideas and avenues of research.

C. J. Hawkesworth

C. J. Hawkesworth is lecturer in Earth sciences at the Open University.

BOOKS

ENVIRONMENTAL SCIENCES

Dizzy reaches

Chemistry of Atmospheres: an introduction to the chemistry of the atmospheres of Earth, the planets, and their satellites

by Richard P. Wayne

Oxford University Press, £30.00 and £14.95

ISBN 0 19 855176 2 and 855175 4

Atmospheric chemistry is a subject that has achieved some prominence in recent years. Now that there is a widespread understanding that the solutions to such problems as urban air pollution, depletion of the ozone layer and acid rain are likely to be both expensive and difficult to find, atmospheric chemists have been expected to provide answers to politically sensitive questions. This may not always be the case, but the growth of a young science, however, Wayne's excellent book will make sure that at the very least our chemistry will be on a firm footing.

Much modern atmospheric chem-

istry seems to derive from the older science of aeronomy which concerns itself with the physics and chemistry of the upper atmosphere (stratosphere).

A result of this ancestry is that many monographs on atmospheric chemistry seem to be preoccupied with the chemistry of the upper atmosphere of the Earth and the other planets. In other books it is possible to discern a different approach which seems to owe something to geochemistry, where the principal concern is the cycling of major elements at the surface of the Earth. The authors of such books treat the sources of various trace gases and pollutants in the atmosphere and consider how and where they are removed from the atmosphere.

Wayne's book seems to owe more to the former approach than to the latter. This is a wise choice, as aeronomy has been influential in highlighting the importance of homogeneous chemical reactions in the atmosphere. It has enabled us to view the atmosphere as a photochemical system in which solar radiation interacts with the gases of the atmosphere, splitting up molecules into fragments or radicals which are highly reactive and drive the overall chemistry. The great advantage of studying these photochemical processes in the upper atmosphere is the fact that where solar radiation is high and atmospheric pressure low their effects can very clearly be seen. For instance, the generation of ozone in the upper atmosphere is such an important process that it increases the stratospheric temperature by nearly 100°C.

Similarly, the early chemists learnt much from the stratosphere that could be applied nearer ground level (in the

troposphere). For instance, their ideas proved essential in unravelling the complexities of Los Angeles smog, which proved to be so different from the mixture of smoke and fog that pervaded the London of Oliver Twist or Sherlock Holmes. Current work attempts to extend our knowledge of homogeneous photochemistry to the unpolluted troposphere, but as Wayne points out "our qualitative understanding of tropospheric chemistry falls far short of that for the stratosphere."

Although Wayne's book uses our extensive knowledge of atmospheric photochemistry to build a coherent picture of the chemistry of the atmosphere, his "aeronomical" approach has its limitations, the most obvious being the reluctance which chemists have often shown in studying the chemistry of the lower atmosphere: the study of this subject is frequently left to ecologists, oceanographers and geochemists. The reluctance to study the base of the atmosphere is understandable, as the upper atmosphere is a rather simpler system in some ways. It does not rain in the stratosphere; the dust and particles that get there are rather small in size and thoroughly dispersed; and the action of life (including human activities) that so pervades the chemistry of the lower atmosphere looks rather less important from the dizzy reaches of the mesosphere. It is even harder to discern the moral issues at that height, so that we can avoid the discomfort of such problems as acid rain. However, even the upper atmosphere has not been able to escape human interference, so that texts and monographs have had to include references to aerosols, supersonic transport, and the space shuttle.

The aeronomical approach becomes most apparent in the treatment of atmospheric pollution, where Wayne devotes 20 pages to the pollution of the stratosphere and only six pages more to the pollution of the troposphere. The author is at ease when writing about the chemistry of the gas phase, but far less comfortable when treating rain, clouds and dust.

Although in the past relatively few atmospheric chemists were trained as such, the number of courses is likely to increase in the coming years. This book would serve as an excellent text for the more chemical elements of such courses and occupy a prized place as a work of reference long after graduation.

Peter Brimblecombe

Peter Brimblecombe is lecturer in environmental sciences at the University of East Anglia.

This illustration of a space battle station proposed by the United States National Aeronautics and Space Administration is reproduced in Frank Barnaby's *What on Earth is Star Wars?* (Fourth Estate, £4.95).

River basins

Rivers and Landscapes by Geoff Petts and Ian Foster

Edward Arnold, £12.50

ISBN 0 7131 6433 6

Until about 30 years ago, the major emphasis in the study of rivers was on how landscapes - including rivers - actually evolved. Such studies were necessarily concerned with landscape evolution during timescales of thousands or millions of years. About 1960, however, geographers realized that more attention should be given to understanding how rivers actually work, and in the two decades of productive research that ensued our understanding of river behaviour has considerably increased. Such advances have enabled a more informed interpretation of the way in which rivers behaved in the past. This general sequence of development is acknowledged in the introduction to this useful and concise undergraduate textbook.

For an integrated study of rivers and landscapes, the authors advocate the catchment ecosystem, consisting of a river or lake together with the associated drainage area. Within this fundamental unit, energy and chemical substances are cycled and recycled as they move through the Earth's physical system. Such an integrating concept is appropriate because it can be used by geomorphologists who study the Earth's surface form; by hydrologists concerned with the cycling of water, sediment and solutes; and also by biologists. River basins, however, are not without their problems, as nearly 30 per cent of the land surface area of

the world is drained by the world's 20 largest basins. Political boundaries transect these: indeed, there are 44 countries where at least 80 per cent of the total area falls within international river basins; and 214 basins are shared by two or more countries.

Within this overall approach, four chapters deal with the way in which the system works now and two chapters (less than 30 per cent of the book) are devoted to past development. The chapters on contemporary rivers outline concisely the basic material, beginning with catchment hydrology.

This summarizes the world river flow pattern, shows how factors such as land use can affect such flows, and indicates why extremes of floods and droughts occur. Each of the subsequent chapters on the dynamics of the river system, and on channel evolution during timescales of thousands or millions of years. About 1960, however, geographers realized that more attention should be given to understanding how rivers actually work, and in the two decades of productive research that ensued our understanding of river behaviour has considerably increased. Such advances have enabled a more informed interpretation of the way in which rivers behaved in the past. This general sequence of development is acknowledged in the introduction to this useful and concise undergraduate textbook.

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Commonwealth Secretariat CHIEF PROJECT OFFICER (Higher Education)

EDUCATION PROGRAMME, HRDG

Applications from suitably qualified Commonwealth nationals are sought for the post of Chief Project Officer (Higher Education) who also serves as Head of the Higher Education Unit within the Education Programme of the Commonwealth Secretariat. The Education Programme forms part of the wider Human Resources Development Group which also incorporates programmes in the field of Fellowships and Training, Health, Management Development, Women and Development, and Youth.

The task of the Higher Education Unit is to foster co-operation between higher education institutions and systems within the Commonwealth through inter-governmental consultation, the exchange of information and experience, and the promotion of practical schemes of co-operation in such areas as staff and student exchange, staff development, research collaboration, institutional linkages, and the sharing of facilities on a regional basis. Specific tasks will include commissioning studies and supervising their preparation, servicing of the Commonwealth Standing Committee on Student Mobility, and exploring the potential for Commonwealth collaboration using the new technologies in the context of open learning.

The successful candidate must be a graduate from a recognised university and preferably hold a postgraduate degree. He/she should have worked in a developing country in the general area of higher education development/co-operation. Skills in analysis and in oral and written communication are important as well as a capacity for establishing good personal rapport with senior personnel in Commonwealth higher education systems. Organising ability in relation to workshops, conferences, projects is essential.

The appointment is normally for an initial period of three years. Salary in the range of £18,552 to £20,520 (gross) per annum, subject to UK Income Tax plus for an overseas appointee, installation and relocation assistance. A job description is available on request.

Applications giving full details of qualifications and experience, together with the names and addresses of three referees should be sent by 30 May 1988 to:

Recruitment Section
Commonwealth Secretariat
Marlborough House, Pall Mall, London SW1Y 5HX
Telephone: 01-839 3431 Ext. 8151 or 8153

SIR JOHN CASS HALLS OF RESIDENCE ASSOCIATION

wishes to appoint as soon as possible a

RESIDENT WARDEN

To manage all aspects of a new hostel in Hackney, London E9, which accommodates 100 students of the City of London Polytechnic, in single study-bedrooms. Full catering facilities are provided.

SALARY c. £11,000

with free self-contained accommodation

We are looking for someone of sound management ability who will respond energetically and cheerfully to the challenges of the hostel and readily establish good relations with the students.

For further details and an application form (to be returned by 7 May 1988) please write on a postcard to Mrs. B. Everett, Sir John Cass Halls of Residence Association, 117 Houndsditch, London EC3A 7BU, quoting reference 88/41.

(74615)

General Vacancies

Plessey Research and Technology FIFTH GENERATION COMPUTING AND SPEECH

This is a major 5 year project funded by Alvey and Plessey to develop a large vocabulary English language speech input workstation. The workstation will be based on a fifth generation computer providing the power required to make use of phonetic, linguistic and artificial intelligence developments. Plessey is the prime contractor for this project, and our partners include Edinburgh University, Imperial College London and HUSAT at Loughborough.

The development environment is a Masscomp signal processor running C, and Xenix AI workstations running Lisp, networked together with a general purpose computer.

We are now seeking staff, with academic or industrial backgrounds, with experience in one or more of the following areas:-

Signal Processing, Acoustic Phonetics, Phonology, Morphology and Lexicon Design, Grammars, Semantics, Man-machine Interfaces, Expert Systems and Computational Linguistics; experience in Interim or Common Lisp, Unix and C would also be advantageous.

Posts are open both to recent graduates and postgraduates in relevant disciplines, and to more experienced staff, for whom a number of senior positions are available. It is recognised that existing university contracts can be maintained where appropriate; these positions could be seen as a window in a longer term academic career.

The Speech Input Workstation Group will be part of Plessey Research and Technology, based at Roke Manor near Romsey in Hampshire. This is at the edge of the New Forest, about 30 minutes from Southampton, Winchester and Salisbury. Starting salaries up to £20,000 are available according to experience and reflect the importance of these posts; a comprehensive relocation package will also apply where relevant.

If you would like to discuss further details please telephone Michael Scott or Ryan Bedford at Roke Manor, tel. Romsey (0734) 515122. For an application form please telephone or write to Mike Collier, Recruitment Manager, Plessey Roke Manor, Romsey, Hants, SO51 0ZN, or dial 100 and ask for FREEDOM PLESSEY ROKE MANOR.

(74644)

GENERAL SYNOD OF THE CHURCH OF ENGLAND BOARD OF EDUCATION SECRETARY FOR THE CHURCH COLLEGES

This post (currently held on secondment) is to become again a permanent appointment.

Basic salary on the scale £12,345 - £15,166 (as at 31.3.86) with possible supplement (max 20%) by negotiation, depending on experience. Starting date as soon as possible, but definitely by 1st January, 1987.

Applicants must have direct experience of the voluntary college system and should be communicant members of the Church of England.

Closing date for receipt of applications 2nd May, 1986.

Application forms and job descriptions may be obtained from:

Miss Anne E. Holt, Personnel Officer, Church House, Dean's Yard, Westminster, London SW1P 3NZ.

Tel 01-222 8011. Ext. 351.

(74618)

Overseas



UNIVERSITY OF CAPE TOWN

Postdoctoral Research Fellowships, 1987

Negotiable periods (3 to 12 months) and no restriction on research fields.

The University of Cape Town annually invites applications for Post-Doctoral Research Fellowships to be held at the University.

The Fellowships are tenable for a twelve month period and the monthly stipend attached to the Fellowship is R2 200. Successful candidates from abroad will receive an additional travel grant up to a maximum of R3 600. The stipend is usually tax free. The buying power of the Rand within South Africa is significantly better than might be expected from the current unfavourable exchange rate.

There is no restriction to any particular field of research.

Preference will be given to recently qualified research workers, but reduced awards suitable for a visit of about three months have sometimes been made to retired staff members of Universities. Preference is also given to applicants whose research interests and facility needs mesh well with those of the appropriate host department.

Each application must include full details of the applicant's envisaged research programme in addition to a full curriculum vitae and the names of two referees whom the University may consult. The dates on which the successful candidates will be expected to take up their duties are flexible and can be arranged to suit the special circumstances of each candidate.

Applications should be addressed to the Head, Research Administration, University of Cape Town, Private Bag, Rondebosch 7700, Republic of South Africa, so as to reach him by 31 July 1986. The initial round of award letters will be despatched at the end of September.

The University's stand against apartheid and all racially discriminating legislation is on record. Information on this as well as on the University's policy not to discriminate in the appointment of staff or the selection of students on grounds of sex, race or religion is obtainable on request.

BWRA 0080

Mu'tah University Kerak, Jordan

Applications are invited for vacancies in the following subject areas:

PURE AND APPLIED MATHEMATICS
COMPUTER SCIENCES
ENGLISH LANGUAGE AND LITERATURE

Applicants should be holders of a PhD in a relevant discipline, preferably with two years' teaching experience.

Salary: \$50-850 Jordanian Dinars per month according to qualifications and experience (JD 1 = £2.00 approx).

The University offers the following additional benefits:

- ☐ free furnished accommodation
- ☐ contributory health insurance not exceeding 2% of annual salary
- ☐ social security scheme 5% gross salary, 10% university contribution
- ☐ free life insurance
- ☐ accretion class share for appointee, spouse and up to 3 children at commencement and termination of appointment.

Applications, enclosing copies of relevant qualifications and publications list, to: The President, Mu'tah University, Mu'tah P.O. Box 7, Kerak, JORDAN.

Closing date for applications: 15 May 1986.

Overseas continued

REPUBLIC OF SINGAPORE

College of Physical Education

LECTURERS

The College of Physical Education is the only Tertiary Institution in Singapore engaged in specialist teacher training for physical education. It is an autonomous body responsible to the Institute of Education Council.

The College is inviting applications from suitably qualified and experienced candidates for four Lectureship positions in the following areas: Biological Bases, Growth and Development, Exercise Physiology, Measurement and Evaluation, Biomechanics, Sociological and Curricular Aspects and teaching method in Physical Education.

The ability of candidates to contribute to the teaching of a variety of practical activities, some at an advanced level is an essential pre-requisite. Areas of greatest need are Movement Education/Gymnastics, Primary P.E. Activities, Apparatus and Artistic Gymnastics, Dance, Soccer, Netball, Squash, Aquatics and Outdoor Pursuits.

General Requirements:

1. Applicants should hold a Master's degree and/or have a specialist qualification.
2. In addition to the above, applicants should hold teaching diplomas or certificates and have at least 3 years' approved teaching or related teaching experience and experience in teacher education is desirable.

Remuneration:

Approximate salary ranges, including National Wage Council (NWC) increases and housing allowance are as follows:
Single Officer: S\$42,378 p.a. - S\$88,563 p.a.
Officer accompanied by spouse or children: S\$45,978 p.a. - S\$90,163 p.a.
Officer accompanied by spouse and children: S\$49,578 p.a. - S\$93,763 p.a.

Other Benefits:

Other benefits applicable to the Lectureship position include loan scheme for the purchase of cars, medical benefits, children's education allowance and ex-gratia payment where applicable, and a monthly contribution by the college of 10% of the Officer's monthly salary plus education allowance towards the Central Provident Fund, subject to a maximum of S\$700 per month. The Officer will also have to contribute 25% of his salary plus education allowance towards the Central Provident Fund, subject to a ceiling of S\$1,500 per month. (The rates of contribution to the Central Provident fund are subject to revision periodically).

Application:

Form for application may be obtained from The Singapore High Commission, 6 Chesham Street, London SW1. Closing date for application: 2nd May 1986.

(74651)

REMINDER

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should
arrive
not later
than 10am
Monday
preceding
publication.

INSTITUTE OF HOSPITALITY AND TOURISM MANAGEMENT Queensland Agricultural College

Applications are invited for appointment to the position of:

Principal Lecturer in Hospitality Management

DUTIES: The appointee will be responsible to the Head, Department of Food Studies for:-

- (i) routine administration within the Institute of Hospitality and Tourism Management;
- (ii) providing academic and research leadership in hospitality and tourism studies;
- (iii) contributing to the development and presentation of academic programs in hospitality and tourism studies;
- (iv) developing, promoting, and contributing to the continuing education program and departmental consultancy activities in hospitality and tourism;
- (v) promoting the Institute of Hospitality and Tourism Management;

- (vi) stimulating and promoting professional comment on issues pertinent to the hospitality and tourism industries and assisting those industries in furthering their status and general interests;
- (vii) such other duties as the Head of the Department may require.

QUALIFICATIONS

- Applicants should have:-
- (i) a higher degree in a relevant discipline;
 - (ii) demonstrated ability in research and teaching; evidence of a high level of organisational and administrative ability;
 - (iii) satisfactory professional experience;
 - (iv) demonstrated leadership within the hospitality/tourist industry;
 - (v) a full appreciation of educational philosophies, aims and practices in the area of advanced education.

SALARY: \$44,541 per annum
APPLICATION, containing a full curriculum vitae and the names of two referees should be forwarded to:-
Agent-General for Queensland, 392-393 Strand, London WC2R 0LZ
CLOSING DATE: 30th May 1988.

(74619)

The
British
Council